falcon®

MAXIMUM PRODUCTIVITY & AUTOMATION

Software Suite

HÖGEMANN
AUTOMATISIERUNGSTECHNIK

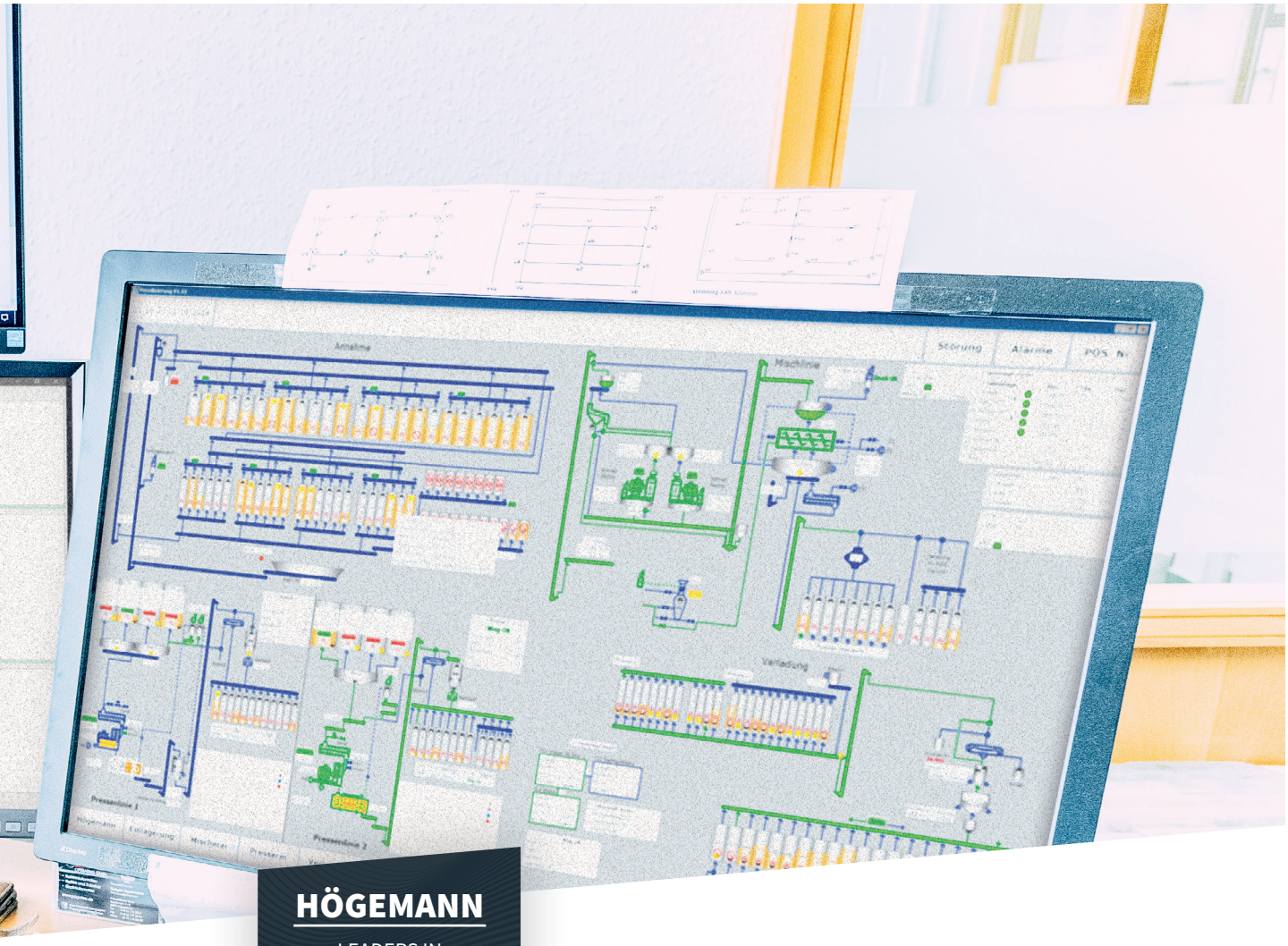
falcon®

MAXIMUM PRODUCTIVITY & AUTOMATION

Software Suite

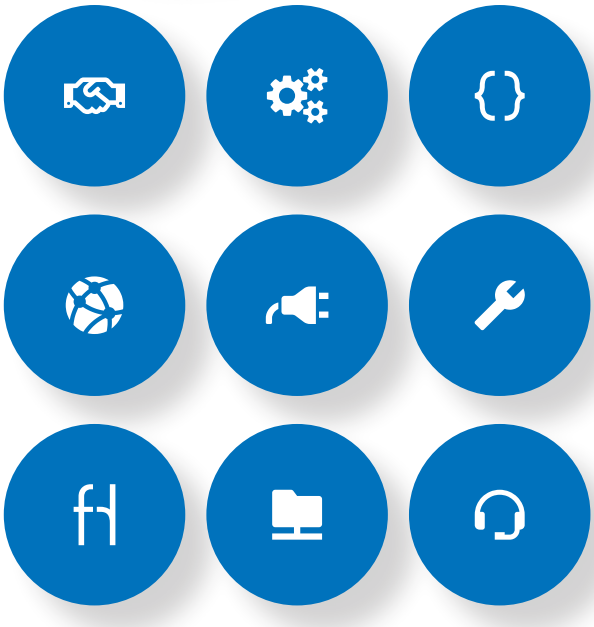
COMPREHENSIVE SERVICE FROM A SINGLE SOURCE

In the feed and food industry, the name Högemann stands for sophisticated automation solutions. In addition, we also offer planning and realisation services for complex automation projects all over the world, including PLC and network technology, switchgear construction in our own production facilities, electrical assembly and installation, and commissioning.



HÖGEMANN

LEADERS IN
AUTOMATION
FOR OVER 30 YEARS



As we belong to the Big Dutchman Group, you benefit from an efficient network of companies spanning five continents and 100 countries.

- **Consulting and project planning**
- **Product and software development**
- **PLC programming**
- **Electrical and switchgear planning**
- **Electrical workshop and control cabinet construction**
- **Electrical assembly and installation**
- **fhalcon® Software Suite**
- **IT systems incl. servers, networks, workstations**
- **Service and 24/7 support**

EXACTLY WHAT YOU NEED.

The animal feed and food industry works with the most modern production facilities handling raw materials efficiently and carefully to produce the highest quality products. In this process, it is of vital importance that all processes can be controlled precisely, monitored continuously and that they remain traceable at all times. We have developed the modular fhalcon® Software Suite to meet these special requirements. Our carefully designed process control system ensures highly automated production and sets new standards when it comes to flexibility and efficiency.

Get in touch with us and make a future-oriented fully integrated process control system a reality for your company today: Telephone +49 4474 9493-0.

All the modules of the fhalcon® Software Suite are developed by us in-house and are based on over 30 years of know-how and industry expertise. They are created, maintained and kept up-to-date by our specialists using the latest development tools.

The fhalcon® Software Suite is Windows-based and supports all current, standard operating systems in client, server and virtual structures. SQL databases are used to store the data. The data, as well as any installed programmes and settings, are backed up cyclically as a full backup or as a shadow copy on several geographically separate storage media. You will of course be informed about the back-up status of your data.

Thanks to its modular construction, our fhalcon® Software Suite can be optimally adjusted to your company and structure. The software can be expanded with additional modules at any time. This allows you to react quickly to changing market requirements.

Being able to change the language of a running system means that you can use the fhalcon® Software Suite internationally and it will support you in the globalisation and expansion of your company. The following languages are already available: German, English, Russian, Bulgarian, Czech, Danish, Spanish, Dutch, Polish, Romanian and Simplified Chinese. There is flexibility to add additional languages. The language files can be maintained either in-house or by a translation agency.

With standardised and customer-specific interfaces, the fhalcon® Software Suite ensures lean processes, transparency and seamless integration into your ERP system or other software from third-party providers. Thanks to the fully-integrated mailing, export, statistics and archiving modules, you are miles ahead when it comes to digitalisation and can make a major step towards having a paperless office.

The ongoing and new development of the modules for the fhalcon® Software Suite is always done in close collaboration with our customers – staying true to our motto “From the industry, for the industry”. With our future-proof rental and service contract (Software as a Service), you can stay up-to-date and best prepared for future legal requirements.

fhalcon® rom

Mixing recipes perfectly – child's play with fhalcon rom® from Högemann. The recipe optimisation software combines in-depth knowledge of the requirements and processes in the feed industry with long-standing experience and technical expertise. Thanks to the option of fast access, modern design and clear user guidance, you have your recipes under control at all times.

basics

[master data] [optimization] [round]

options

[higher right] [personal data] [plant] [declaration]
[article declaration] [automatic declaration]
[automatic declaration printing] [material flow balance]
[premix] [global optimization] [fixed recipes] [ration]
[production data] [dangerous goods] [carbon footprint]
[language data]

fhalcon®
MAXIMUM PRODUCTIVITY & AUTOMATION
Software Suite

[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® rom are:

Ingredient master data:

- Description (trivial, declaration, chemical), units
- Declaration, recipe and default options per product type and animal species
- Note and declaration texts per ingredient (can be entered with limits)
- specific or global display and rounding options
- Animal species-specific restrictions: whether and within what limits a raw material permitted for an animal species
- Labelling of specific ingredients per animal species for display and printout
- Ingredient groups
- Test groups for maximum contents and for min / max production (production and carry-over control)
- Management of phytase surcharges (verd. Phosphorus)

Raw material master data:

- Designations (trivial, declaration, chemical, manufacturer)
- Global input / change of ingredients with dry matter conversion
- Display of concentrations in original, 100% dry matter and according to formulas for ingredients
- Declaration options per product type and species with / without quantity, dissolve, summarise
- Declaration texts per raw material (can be entered with limits)
- Specific or global display and rounding options
- Animal species-specific restrictions: whether and within what limits a raw material permitted for an animal species
- Option of storing internal info text for each raw material (display during recipe creation - see info system)
- Setting of scale parameters and line selection (e.g. locked in recipes or plants / lines)
- Creation of raw material groups to collect the obtained raw material portions and the added output on the label under one designation
- Input / storage of parts lists for semi-finished products (e.g. premixes or additives) for breaking down into the individual components on the label

Price list master data:

- Enter / change / copy and deletion of any price lists
- Conversion into any currencies (EUR / USD / etc.)
- Setting of whether prices are used in 1kg / 100kg or 1t
- Creation of weighted price lists from several single price lists
- Price mark-up system for recipes (fixed and percentage mark-up types freely definable)
- Price calculation (for optimisation or rounding):
  - After price changes for all or selectively chosen mixed recipes according to any price lists
  - Chain calculation, including of raw materials in recipes, that have been created from other recipes
  - With resolution of the selected price mark-ups

Recipe master data management:

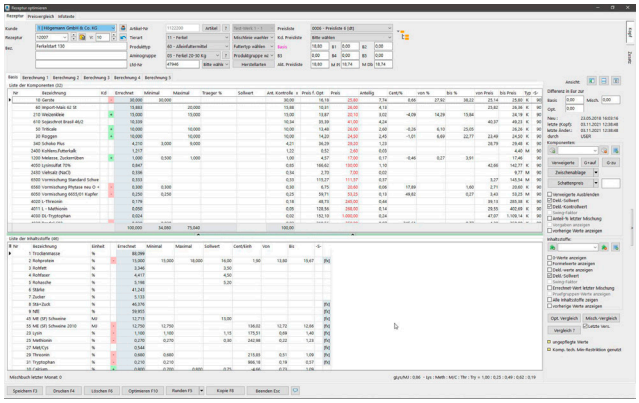
- Recipes structured according to animal species and product types
- Insert ingredients (directly via number, ingredient search, ingredient suggestions or by the stored animal species, feed type)
- Insert raw materials (directly via number, component search, component suggestions)
- Option of maintaining feed types, when changing a feed type, the stored recipe designation, product type, animal type and ingredients can be automatically loaded with their requirements.
- Verification / exchange / deletion of raw materials or ingredients
- Extended search functions according to various criteria (e.g. based on raw materials or ingredients with their proportions, product types, animal types, designations, mixing book, etc.)
- Amino acid ratios
- Specification and storage of energy and amino acid requirement values
- Display / printout of ratios in optimisation / rounding / calculated mixture
- Simultaneous display of recipe according to different price lists
- Input of target values for printing or the declaration
- Display of ingredient values of the current declaration
- Recalculation of various formulas for ingredients (e.g. energy) that are not to be considered simply cumulatively
- Display of ingredients per component at the push of a button
- Display of ingredient distribution from the components used in the recipe
- Test groups for setting maximum ingredient levels
- Product families/recipe groups: Grouping of recipes according to production focus, for example, or purchasing groups for batch optimisation and consumption forecasts, search function, etc.
- Comparison: Current optimisation / production mix with difference display for raw material requirements
- Selected optimisation and/or production mixes with raw material and ingredient analysis
- Item declarations (with component values, even if declared closed)
- Rations with components and active ingredients in OS or 88%TS

Complex info text system:

- Management of text modules (free assignment of categories, e.g. storage instructions, feeding instructions)
- Information system (from customer to ingredients, components, recipes, mixing instructions to the order)

User rights:

- Assignment of user rights (individually or in defined groups)
- Access restrictions for individual programme parts or functions (e.g. change recipe, change master data, view net purchase prices, etc.)



fhalcon® rom optimization

[optimization]

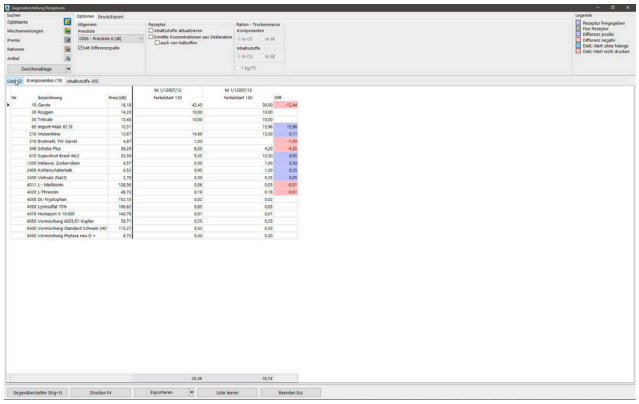
Recipe optimisation has never been so easy! Our user-friendly interfaces means you can achieve the desired result quickly and effectively.

- Recipes or product groups / product families selection
- Display of limits, costs, refused raw materials, accounting prices, optimal amino acid ratios, etc.
- Comparison of raw material requirements optimisation with current production (mixing instructions)
- Recipes can be optimised as often as desired during processing without changing the output basis, whereby the last five optimisations can always be viewed and compared in parallel
- Entered maximum contents are taken into account in addition to the restrictions
- Technical restrictions can be entered per component and plant/ line (e.g. component share equal to 0 or at least 2%).
- A ‚swing factor' can be set for the components of the recipe so that the optimisation does not deviate too far from the existing exported mixing instruction
- Components can be switched from active / inactive by clicking

[round]

Automatic recipe rounding after optimisation or calculation.

- Automatic rounding of the component proportions according to the default value in the raw material file to the mixer size or scale resolution
- Balancing of the mixture by means of a raw material list, individual raw material optionally by means of the cheapest component, the one with the largest share or the carriers set in the recipe
- Highlighted display of ingredients in case of deviation from the specifications (min / max)
- Storage as raw material (supplement / concentrate) and as production mixture
- Input of component proportions in percent or kilograms with reciprocal conversion related to the set batch



fhalcon® round

[higher right]

Higher-level rights assignment for optimal administration of authorisations:

- In addition to the user rights management, the plant, customer and recipe level rights can be assigned / restricted to the individual users.
- Possible settings for example:
  - which plants the user can choose (with 5 plants e.g. only plant 1 and plant 3, the others are not accessible to him)
  - sales representative may only select certain customers
  - a sales representative for cattle cannot view and edit recipes for pigs
- The rights are restricted at the data level, i.e. when the programme is started, the areas that are not permitted are not loaded.
  - plants 2, 4, 5 are not available for this user
  - unapproved are not available
  - the pig animal type, for example, does not exist in the selection boxes
- Within the data assigned to them, the user has the rights from the user rights administration.

[personal data]

Administration and maintenance of all personal master data combined with customer-specific modules.

- Administration of all personal master data (customers, suppliers, forwarding agents, field staff, etc.)
- Customer-specific
  - articles, recipes (text notes, etc.),
  - components,
  - prices (and surcharges),
  - declarations, etc.

[plant]

Production plant-related data management provides a better overview and simplifies work.

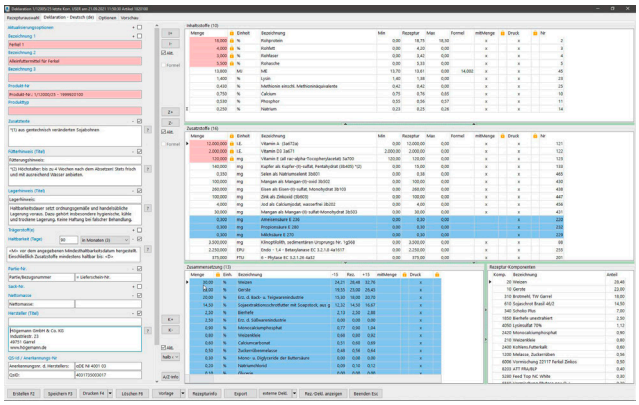
- Global or individual view of components, recipes, mixing instructions
- Fast switching between plants
- Plant-related settings/data such as:
  - Default batch
  - Import/Export settings
  - Lines, scales
  - Recognition number, etc.

[declaration]

That‘s how declaration works today: Save valuable working time with our smart declaration module!

- Automatic (‚one-click‘) declaration according to applicable regulations
- Automatic / manual declaration text export (pure text and / or including formatting)
- Free selection of font, font size, style
- Free assignment of declaration text block titles
- Optional semi-open / open declaration (with / without display of component parts)
- Possible manual post-processing of raw materials and ingredients when creating the label
- Use of automatic rounding factors for ingredients and components when creating the label (see component / ingredient management)
- Resolution of the semi-finished products using the bill of material stored with the raw materials (see Raw Materials). Calculation of the proportion of composition, possible addition and combination in the case of already existing individual raw materials
- Display of the stored parts list by pressing a key on the raw material
- Summary of raw materials under the raw material group (cf. Raw materials)
- Automatic transfer of information texts (e.g.: Feeding instructions, Gene regulation) on the label (cf. raw material / ingredient management) and manual use of text modules.
- Fade-in of the current label when editing the recipe and creation of the new label

- Management of several manufacturers with their logos and possible EU identification numbers
- Management of animal logos according to existing animal groups for printing on the label
- Option of entering the lot number for printing on the label
- Declaration text replacement: with this module, changes to texts, EC numbers, etc. for ingredients, additives or components can be replaced or updated on all declarations and delivery notes without having to recreate the declarations or losing (manual) changes to the content.



fhalcon® rom declaration

[article declaration]

Sales item-related declaration options, this further simplifies the declaration process.

Item declaration options:

Save item declaration options:

- For ingredients, additives and composition, the ‚Value, with quantity and pressure' fields can be fixed per record for each article. This means that these fixed fields are not updated when a new declaration is created due to a changed recipe, and remain article-specific. However, it is also possible to overwrite (update) the fixed fields. Item declarations that contain fixed fields are highlighted in colour.

Additive:

- Ingredients or additives that would no longer be included by the current declaration are removed even if they are fixed (e.g.: a new premix replaces magnesium sulphate with magnesium oxide). Components that would no longer be included by the current declaration are not replaced.
  A warning message is issued if the composition exceeds 100% or, in the case of an open declaration, the sequence no longer complies with the legal requirements.

[automatic declaration]

Order-related mixing in of additional components or special mixtures automatically declared.

- Cyclical control of special mixing orders from production or merchandise management
- Import of the special mixing orders
- Creation of a valid declaration in compliance with the stored declaration regulations and the interface parameters for each plant on the basis of the data from the special mixing order
- Export of the order-related declaration to production or merchandise management

[automatic declaration printing]

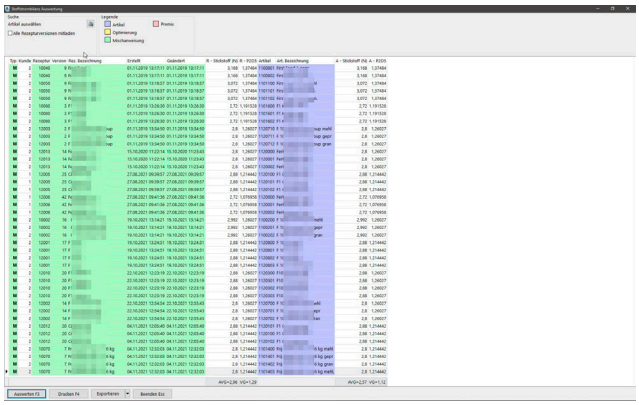
Automatic printout of bag labels with actual values from production.

- Cyclical control of print jobs from production or merchandise management
- Import of print jobs
- Start of the print job based on the transferred data (which article, lot number, net mass, which printer, number of labels, etc.)
- Saving and logging of the job (plus additional storage as a PDF file)

[material flow balance]

Starting point for nutrient flows.

- Defining the active substances for export
- The active substance values of these ingredients are determined as follows:
  1. The active ingredient values are declared, if not then 2.
  2. The values can be calculated from declared active ingredients, if not then 3.
  3. From the mixture, if not then 4.
  4. The values can be calculated from the active substances in the mixture.
- The active ingredient values are output for the corresponding mixture version and all assigned articles with date.
- The data is exported to production and/or merchandise management.
- Output of a total balance sheet for all selected articles over a selected period of time



fhalcon® flow balance

[premix]

The premix module is characterised by a variety of options.

- Indication of the dosage in the final feed (with the option of conversion to new dosage via components, ingredient demands or both)
- Automatic calculation of component proportions via ingredient requirements
- Display of ingredients required and calculated in the mixture and in the final feed
- Indication of several carriers and the option of setting them in relation to each other, plus carrier compensation
- Option of rounding or converting the raw material proportions to a given batch according to scale parameters directly in the recipe, as an indication of how the mixture could be falsified in production
- Storage as raw material (supplement / concentrate) and as production mixture

[global optimization]

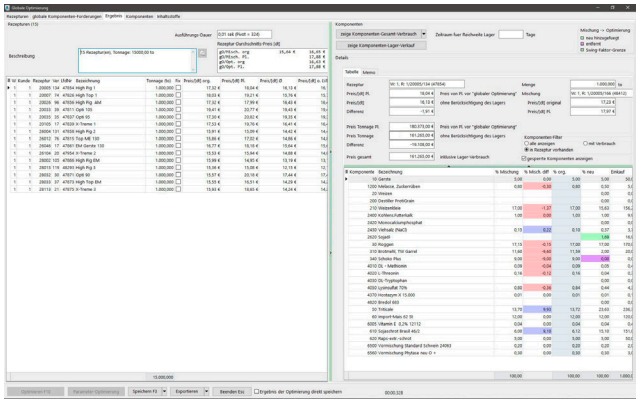
Optimal raw material distribution for a selected pool of recipes.

- This programme provides an optimal raw material distribution via selected mixed recipes with global restrictions on raw materials.

Raw materials are often only available in limited quantities or the consumption of individual raw materials must be forced

  - after entering the compound feeds to be produced and the production quantity per mix, the relevant raw materials are specified with minimum consumption or maximum tonnage to be used
  - automatic calculation of the optimal distribution of the raw materials and providing the total consumption of raw materials and the additional costs compared to individual optimization
  - the composition of all recipes with the indication the prices for the individual / global optimization and the Production mixtures will be specified

- Technical restrictions are observed
- A percentage upper/lower limit ‚swing factor' for components can be stored to ensure that the composition of recipes is not completely changed by the optimal solution
- Recipes can be set ‚fixed' so that they are not changed in the optimisation, but still represent consumption.
- Parameterised optimisation
  - Recipe changes with gradual change of a raw material price
  - Recipe changes when the concentration of an active ingredient is gradually changed
- Display of the theoretical range of an existing raw material quantity
- Generation of average price lists (from weighted warehouse/ purchase prices) for further use in optimisation or calculation



fhalcon® global optimization

[fixed recipes]

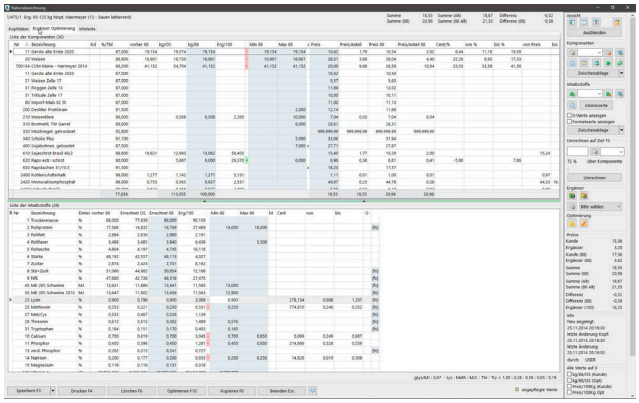
Fix recipes so that they are excluded from batch or global optimisation.

- With this module, recipes can be given the ‚fixed' status, meaning that recipes (optimisations / mixtures) can no longer be changed. These are highlighted in colour in the programme masks.
- In the single optimisation, they can still be optimised in order to show any differences, but they cannot be saved
- These recipes are not taken into account in batch optimisation
- In global optimisation, these recipes are only used for raw material consumption, but are not changed

[ration]

Ration modules for the following areas: Supplement optimisation, Pig, Dairy, TMR, Cattle, Horse.

- Management of feed curves and feed curve groups for summarised output over several feeding phases
- Customer specific ration management: easy modification of ration requirements, components, ingredients, prices, etc.
- Storage can additionally be customer and even ration-specific
- Supplement optimisation
  - Specification of the proportion of the supplement in the ration (also feasible via the quantities of the farmer's farm components)
  - Optimisation of the supplement via additional components offered and specifications for the ration (e.g. pre-fattening mixture)
  - Direct display of the total ration and the supplement mixture
  - Simple transfer of the supplement to the ‚Pig Ration' module for further consultation by the farmer or as a mixture specification to the supplier
- Pig
  - Specifications for the supplements on the basis of the difference between the customer components at the push of a button and transfer to the farmer by print or to the supplier by files
- Dairy cattle
  - Calculation of the dairy cattle ration from basic, compensatory and concentrate feeds
  - Calculation of requirement values from maintenance and milk yield
  - Automatic calculation of feed additions using various performance levels (also with basic feed or compensatory feed displacement)
  - Milk yield plan over different levels and feed plan
- TMR
  - Calculation of the TMR ration
  - Calculation of requirement values from maintenance and milk yield
  - Milk yield plan over different levels and feed plan
- Cattle
  - Management of requirement values and requirement value groups
  - Evaluation of feed plans via Ts and Me
  - Automatic calculation of feed additions per live weight
- Horse
  - Management of requirement values and requirement value groups



fhalcon® rom ration

[production data]

Integrate the actual production values.

- Mixing slip:
  - Sort mixing recipe according to scale allocation and dosing sequence, printout (not required if mixing recipes are transferred directly to production)
- Consumption forecast:
  - Determination of raw material requirements when tonnage is specified for the selected mixing recipes (Stock sufficient for specified production requirements?) including comparison via optimisation and mixing book
- Mixing book/statistics:
  - Recording of production data (daily, weekly or monthly)
  - Manual entry (if transfer is disturbed)
  - Display/correction of entered data
  - Evaluations:
    - Individual batches Mixing recipes for any time periods
    - Raw material consumption of each recipe individually / in total
    - Summary according to product groups (pork, beef, etc.)
    - Quarterly evaluations Optionally with price evaluation, etc.

[dangerous goods]

Expand your optimisation system with information on hazardous substances / goods.

- Recording of hazardous substance / good information on recipes and components
- Required hazard symbols
- H-phrases, P-phrases, (R-phrases, S-phrases, Z-phrases, etc.)
- Recording of road transport (ADR) or sea transport (IMDG) information
- Class, packing group, UN number, tunnel code, etc.
- Export of recipe / component data to external system for classification
- Transfer of hazardous substance / good information from external programme
- Automatic export of recipes to classification programme when creating articles
- Output of the hazardous substance / good information on the recipes declaration
- Dangerous goods in order entry:
  - Differentiation of the transport type (loose, bagged, mixed)
  - Determination of the transport points per order item / entire order
  - Determination of the permissible truck/tanker type
- Output of the dangerous goods information of the order
- Classification (exempted, limited quantity, not exempted), transport points, etc.
- Output of the order items:
  - UN number, hazard trigger, hazard class, packing group, tunnel code, etc.
- Output of order confirmation/delivery note:
  - additional printout of stored safety data sheets and accident leaflet for dangerous goods items

[carbon footprint]

The CO_2 balance is becoming increasingly important today, integrate it into optimisation!

- Determination of active substances for export
- Storage of additional values per plant (emission values for the respective plant, transport, etc.)
- Output of a total balance sheet for all selected articles over a selected period of time

[language data]

Multilingual data management for your international business and export.

- Languages management
- Easy maintenance of all relevant texts and designations
- Customer-side translation

fhalcon® dispose

With fhalcon® dispose, you can save valuable time and money with central disposal, because thanks to the smart and individually configurable processing of your data, you can effortlessly maintain an overview of your trip planning. A range of useful tools also help you to automate regular processes.

basics

[master data] [map] [plan]
[timeline] [statistics]

options

[restriction] [telematic app]
[telematic interface] [farm demand]

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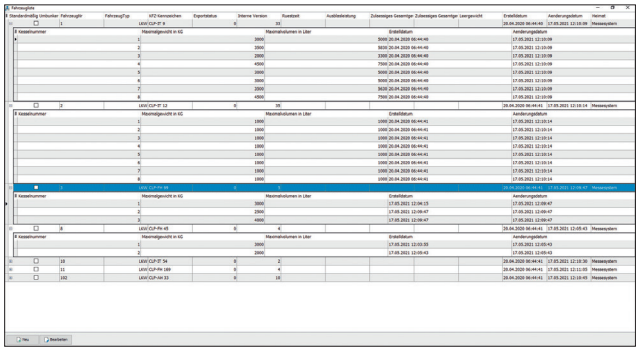
[master data]

The foundation and starting point for all fhalcon® modules is always the master data. This master data used is cross-plant and is automatically maintained by the linked plants, production sites or agricultural trading sites. The most important data for fhalcon® dispose includes:

Product master data:
- Item master data
- Raw material or finished product
- Density

Personal master data:
- Address master data
- Type of address
  - Customer
  - Silo
  - Plant
  - Production facility
  - Agricultural trader
- Coordinates
  - Latitude x
  - Longitude y
  - Grade

Fleet master data:
- Vehicle master data
- Vehicle type
- Type of telematics connection
- Technical specifications
  - Discharge capacity
  - Set-up time
  - Weights
- Country of origin
- Tank
  - Weights
  - Volumes

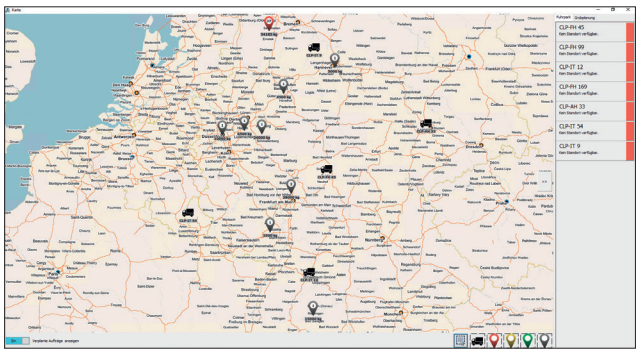


fhalcon® dispose master data: Vehicle list

[map]

Optical support for planning and disposal with up-to-date maps.

- Integration of maps
- Coloured display of open orders as silos with the following colours
  - Red (delivery date within 24 hours)
  - Yellow (delivery date within 48 hours)
  - Green (delivery date within 72 hours)
  - White (delivery date more than 72 hours)
- Display of planned and/or unplanned orders
- Display of the number of orders and amount of coordinates
- Display of additional data such as the name and location of the silo
- Opening of orders from the map
- Planning of order trips from the map
- Planning of trips for trucks carrying orders and a silo from the map
- Flexible filtering of the displayed silos, as the map and order list are linked
- Display of current truck positions (telematic option)

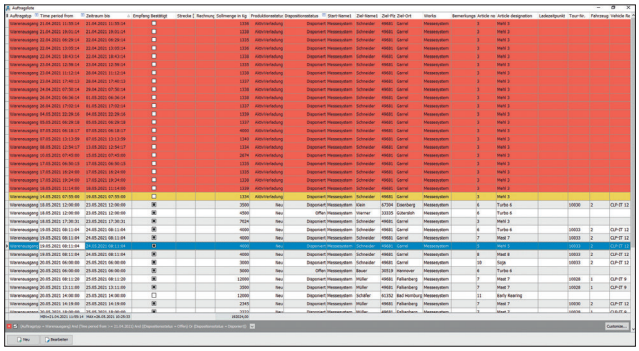


fhalcon® dispose map: map view

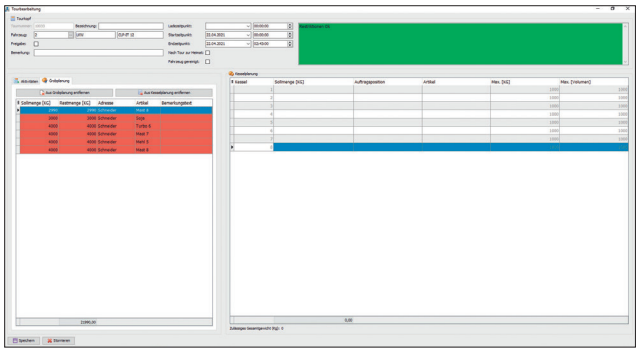
[plan]

Planning and disposal of trips with freely configurable, user-specific lists.

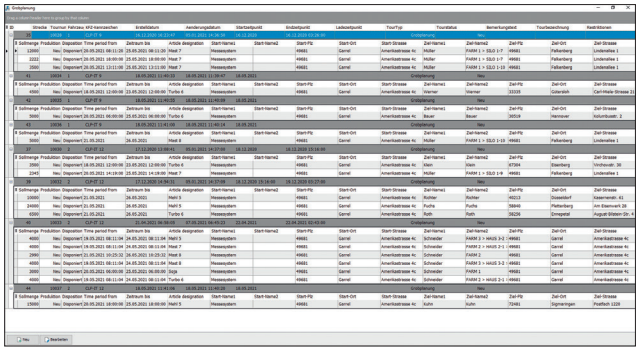
- Freely configurable and user-specific order summaries
  - Field selection
  - Width and position
  - Filtering in the list
  - Storage as a planning monitor for recurrent use
- Consideration of all orders to be scheduled, including
  - Incoming goods
  - Outgoing goods
  - Bagged goods
  - Forwarding orders / Drop shipments
- Rough planning by drag-and-drop
- Order change by drag-and-drop from truck to truck
- Automatic comparison with linked plants, production sites or agricultural trading sites
- Automatic tank planning as recommendations
- Tank volume check
- Cleaning notifications
- Storing of activities
  - Loading
  - Unloading
- Display of current product availabilities
- Display of current production and loading status
- Projection of order and trip times using the default parameters
  - Loading time
  - Set-up time
  - Discharge time per tonne
  - Motorway speed
  - Main road speed
  - Built-up area speed
- Automatic updating of order and trip times (telematic module)
- Reference system for short-term orders
- Reference system for changes to planned orders
- Review of completed trips and orders using the start / end dates and travel times (telematic option)



fhalcon® dispose plan: order list



fhalcon® dispose plan: order trip



fhalcon® dispose plan: order trip list

[timeline]

Vehicle-related trip sequence overview on a timeline.

- Timeline for the current time
- Clear colour display for each vehicle:
  - Planned trips
  - Active trips
  - Completed trips
- Rapid reaction to delays
- Display as a time bar with the start and end time of the trip
- Automatic update with new telematics data (telematic option)
- Open trips directly by double-clicking

[statistics]

All processes are logged and archived. You can use our statistics module to review and evaluate all processes.

Evaluation options:

- Completed trips
- Completed orders
- Master data
- In each case across all available columns

Statistics functions:

- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User and workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print

[restriction]

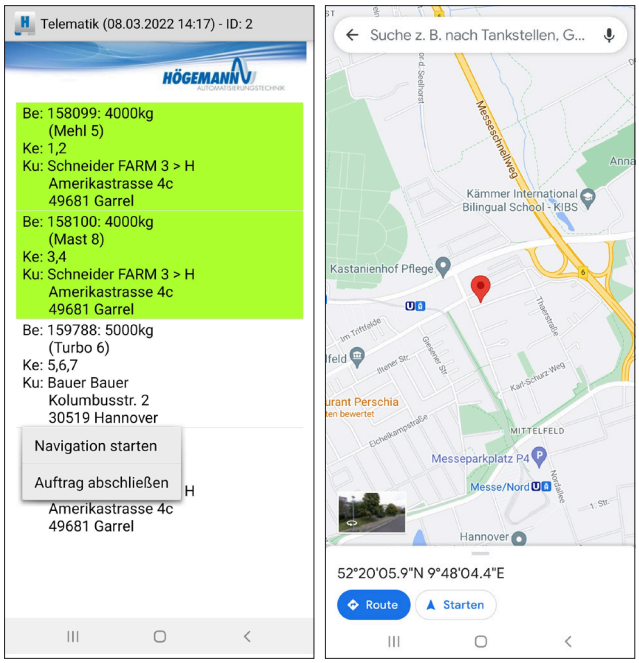
Customer, product, vehicle or order restrictions are taken into account.

- Flexibly adjustable
- Warning and ban restriction categories
- Time restrictions
  - Specified delivery times from the order
  - Opening times
- Vehicle-specific restrictions
  - Type
  - Equipment
- Product-specific restrictions
  - Carry-over check
  - Mixed loading ban
  - Colours
- Coloured notice in the planning if restrictions are violated
- Notice after re-checking by updating or changing the trip

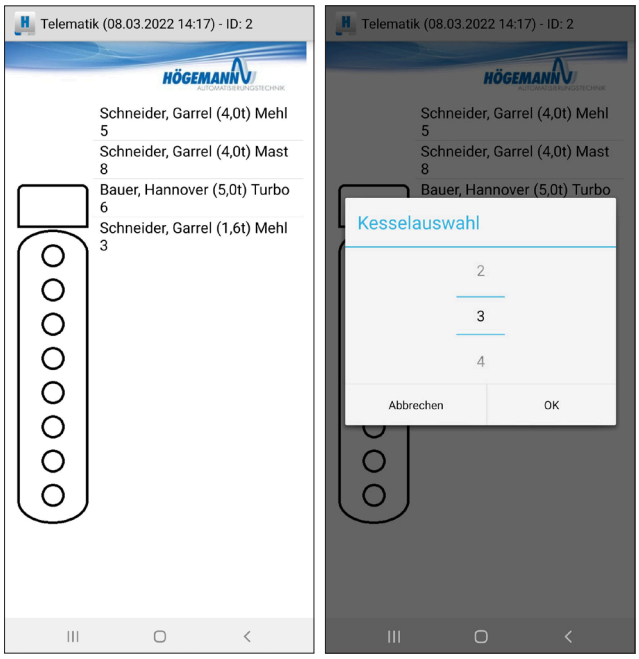
[telematic app]

Navigate and process orders or trips via the app on your mobile phone or handheld mobile device.

- Truck-specific navigation software and maps
- Transfer approved trips to the vehicle
- Display all relevant order data
- Detailed trip planning via the app
- Trip starts automatically after loading is complete (fhalcon® export module)
- Support with trip processing
- Automatic start of the navigation software with target coordinates
- Navigation to the silo
- Acknowledgement of completed orders and starting of the next order
- Coordinates automatically updated after the order has been acknowledged
- Transfer of the position data to the disposal



fhalcon® dispose telematic app: navigation



fhalcon® dispose telematic app: order start and tank allocation

[telematic interface]

Connect and integrate telematics systems.

- Transfer of approved trips
- Transfer of all relevant order data
- Automatic updating of the coordinates after order acknowledgement
- Transfer of position data to the disposal
- Acceptance of the updated data

[farm demand]

Connect and integrate farm management systems. When can I deliver how much of what?

- Cyclical reading out of farm data
  – Stocks
  – 7-day consumption forecast
- Clear presentation and filtering of data (When can I deliver how much of what?)
- Import of orders
- Export of orders
- Export of production, loading and disposal status
- Export of delivery notes as PDF documents
- Export of material flow analysis values
- Integration into trip planning

fhalcon® truck

fhalcon® truck makes it possible for you to manage completely all weighbridge processes. It can be done either manually by your staff or by means of driver self-service with language selection, transponder card dispenser, image archiving, automatic number plate recognition and signature pad.

basics

[master data] [weigh] [stock management]
[track and trace] [inventory] [statistics] [archive]

options

[order] [transponder self-service] [number plate identification]
[gate management] [camera integration] [digital signature]
[digitalize shipping documents] [multilingual truck register]
[mailing] [interface]

fhalcon®
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[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® truck includes:

Personal master data:
- Three-stage address management up to the silo / farm
- Supplier / Delivery person
- Carrier

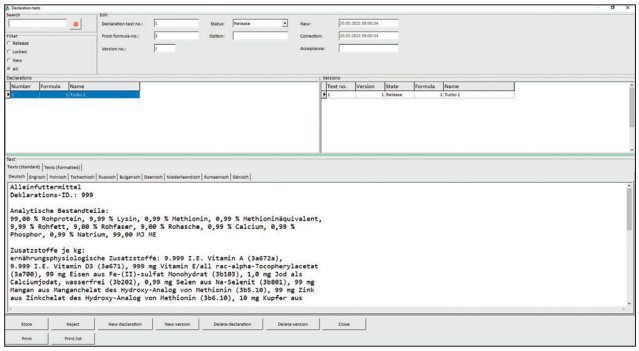
Vehicle master data:
- Vehicle types
- Registration number
- Weights

Product master data:
- Components and item master data
- Item-related raw material qualities
- Item declarations
- Density
- Material flow balance values

Storage and storage space / cell master data:
- Technical dimensions, capacity and volumes
- Minimum stock level
- Approval for filling / emptying
- Approval for the automatic system
- Mixing area for goods tracking and tracing

Transponder master data:
- Card type (day or permanent)
- Validity
- Vehicle allocation
- Person allocation
- Language

User management:
- Module-related
- Can be maintained by the customer
- Logging
- Evaluation



fhalcon® truck master data: item declaration

[weigh]

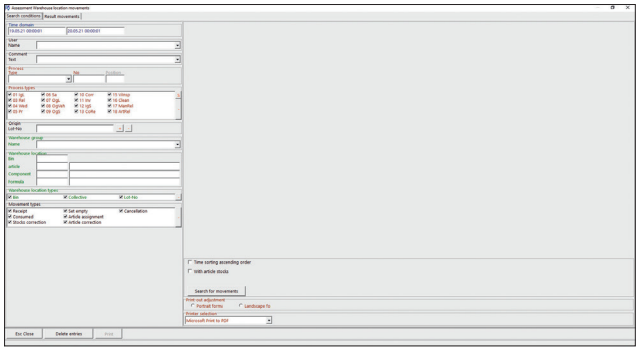
The consistent recording of all product flows starts with the incoming goods. With our weighing module, you can integrate calibratable scales evaluation devices into your overall system.

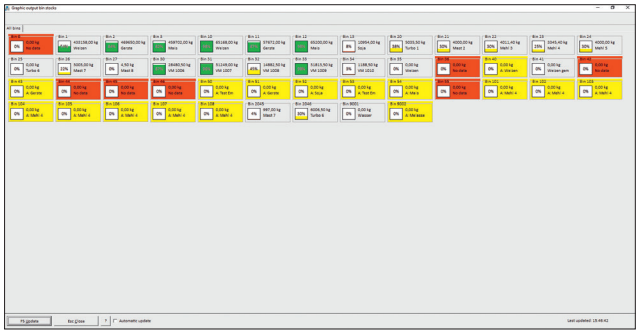
- Can be connected to all standard scales evaluation devices
- TCP / IP protocol or comparable
- Works with multiple scales
- Weighing can be done at any workstation in the network
- Incoming / Outgoing goods
- External weighing
- Gross weighing
- Check weighing
  - Loose trips (fhalcon® export module)
  - Bagged trips (fhalcon® export module)
  - Bagged goods purchases and sales
- Resetting via dialogue
- Saving or printing of alibi data
- Printing or direct emailing (mailing option) of receipts with signature (digital signature option) for each process
  - Flexible layouts according to customer specifications
  - Integration of logos or letterheads
  - Person or product-related layouts / printer
- Printing of delivery notes with declaration
- Printing of identification labels for retained samples
- Permanent display of the weight of the approved scales
- Allocation of blank weighings

[stock management]

The stock management allows you to maintain an overview of where products are located and stock levels. This guarantees a smooth production process and forms the basis for effective goods tracking and tracing.

- Stock bookings can be made immediately after the weight has been determined
- Direct or process-controlled cell booking (fhalcon® import or fhalcon® export)
- Product-related
- Storage space-related (e.g. cell, area or space)
- Group-related (can be defined and configured freely)
- Storage location and space-related (e.g. hangars)
- Lot-related (bagged goods / piece goods)
- Component and cell inventories
  - Storage space-related
  - Group-related
  - Storage location or storage space-related
  - Lot-related
- Movement lists (each booking with reference)
- Visual inspection and logging of cell cleaning with user and flexible warning text
- Graphic inventory
- Minimum stock lists



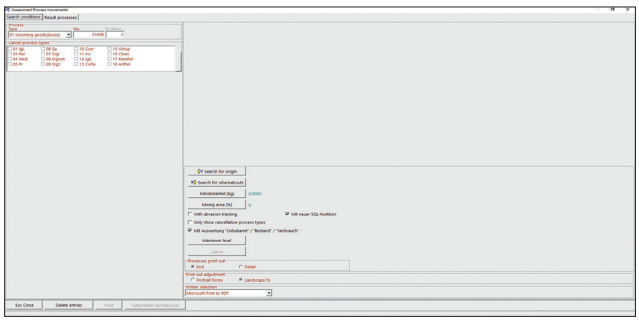


fhalcon® truck stock management: storage movements and stock overview

[track and trace]

Regulatory requirements are becoming increasingly comprehensive and complicated to fill out manually or on paper. Our goods tracking and tracing module supports you at the push of a button. The search works both forwards and backwards, and from one process to another.

- Process-related in all directions
- Lot-related and FiFo (First in First out)
- Consistent monitoring of stock movements
- Adjustable mixing range to take the mixing behaviour / funnel formation of a silo into consideration
- Address data output for purchases and sales
- Animal feed sales list directly as Excel file incl. all data required by the relevant authorities
  - Address data (supplier / invoice recipient or dealer / delivery address)
  - Delivery date
  - Quantity delivered
  - Type of feed
  - Composition / Structure
  - Commercial name
  - Item number
  - Process number
  - ID number of the lot (all batches involved)
  - Delivery note number
  - Target animal
  - Maximum usage rate in accordance with the directions for use in %
  - Mixed quantity of the component concerned in kg
  - Mixed proportion of the component concerned in %
  - Mixed proportion, according to the formula, of the component concerned in %
  - Follow-up delivery received on
- Direct access to documents stored in the long-term archive
- Display of whether the process that you are looking for has been used or is still in stock
- Direct search for orders / lots

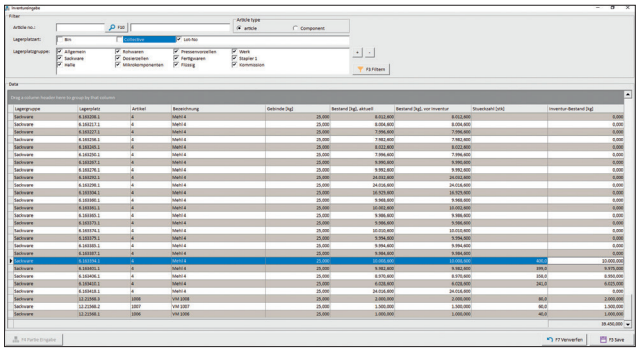


fhalcon® truck track and trace: location of incoming goods

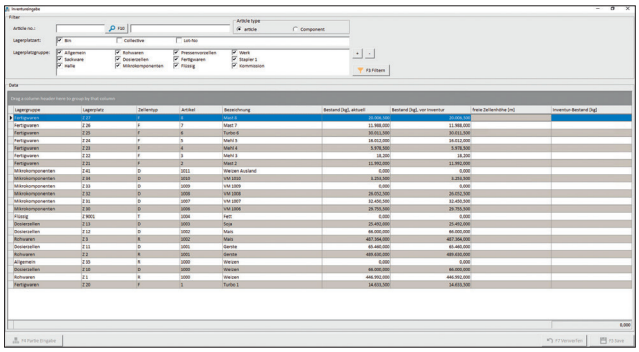
[inventory]

Checking your inventory regularly helps to ensure that your stock management is up to date and guarantees the traceability of goods. It also helps you to detect any irregularities and possible product loss.

- Freezing of stock for recalculation later once the inventory has been completed
- Storage space-related (e.g. cell, area or space)
- Lot-related (bagged goods / piece goods)
- Printing of count lists
- Export of count lists
- Storage space group-related count lists
- Checking of issued and returned lists
- Input of free meters for silos for automatic stock calculation based on the cell dimensions and product bulk density
- Quick entry as a list
- Multiple inputs with comparison
- Checklists for finished products and raw materials with comparison of purchases, the produced quantity and sales, incl. a visualisation of the differences
- Comparison of inventories
- Scanner-supported inventory



fhalcon® truck inventory: lot stock input



fhalcon® truck inventory: cell stock input

[statistics]

All processes are logged and archived. Our statistics module allows you to review and evaluate all processes and movements.

Evaluation options:

- Incoming weight notes
- Outgoing weight notes
- External weight notes
- Control weight notes
- Stored quantities
- Removed quantities
- Stock movements
- Storage space movements
- Product movements
- Process movements

Statistics functions:

- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User and workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print
- Reprint receipts

[archive]

Document archiving system for your paperless office. Printed receipts and important logs are automatically saved in the file system.

- The printed receipts are automatically saved as PDF files
- All process data is automatically saved as XML files
- Several storage locations are used
- Data is saved in a clear, chronological folder structure
- Re-printing is done from the archive
- Automatic archiving after modifications have been made to receipts
- Image archiving (camera integration option)
- Archiving of external documents (digitalize shipping documents option)

- Automatic sending of receipts (mailing option)
- Archiving with digital signature (digital signature option)
- Provision of archive data for third-party systems

[order]

How order management works today: You can prevent incorrect information and inputs either via an interface (interface options) or by recording in our system.

- Inputting and management of orders
  - Incoming loose / bagged goods
  - Purchase contracts
  - Outgoing loose / bagged goods
  - Sales contracts
- Quick entry of outgoing loose goods
- Recommendations for farm / silo from previous deliveries
- Automatic, manual or scanner-supported recording of actual purchasing and / or sales quantities (scan option)
- Order or process-related weighing
- Weighed orders disappear from the pool
- Order tracking
- Filter and evaluate by person or product
- Contract booking

[transponder self-service]

Transponder card-controlled driver self-service which allows the truck driver to start and manage processes.

- Self-weighing via transponder cards
  - Incoming goods
  - Outgoing goods
  - External weighing
  - Check weighing
  - Follow-up weighing
- Blank weighing
- Automatic printing with signature (digital signature option) after second weighing
- Receipt and label printing
- Automatic booking
- Supports a wide range of different types of transponder cards and readers
  - Contactless
  - Entry card reader
  - Card dispenser
  - Desktop device
- TCP / IP protocol or comparable
- Check to see whether a valid process exists
- Information display for readers with display screens
- Opening of gates and doors (gate management option)
- Control of traffic lights and lights
- Holding of transponder cards, as long as the process is running (entry card reader and card dispenser)
- Allocation of day and permanent cards

[number plate identification]

The automated registration / identification of vehicles by their number plate makes the recording and identification process easier.

- Reading out and saving of the read registration number
- Validity check
- Supports a wide variety of different camera types
- Check to see whether the vehicle exists and has been approved
- Check to see whether a valid process exists
- Automatic weighing
- Opening of gates and doors (gate management option)
- Suggestion of the read registration number with registration or further processing

[gate management]

Access control and opening of gates and doors for admission to site, hoppers, loading lanes or driver's cabs.

- Triggered via transponder cards (transponder self-service option)
- Triggered via automatic number plate identification (number plate identification option)
- Validity check
- Check to see whether a valid process exists, only approved if the process exists or has been allocated

[camera integration]

Action-controlled, process-related display and archiving of camera images.

- Archiving of camera images
- Allows for an unattended or driver self-weighing
- Supports a wide variety of different network cameras
- Process-related storage and display for the following processes
  - Weighing with truck scales (fhalcon® truck)
  - Truck loading (fhalcon® export)
  - Receiving hopper (fhalcon® import)
  - Driver's cab for handheld device allocation / handover (fhalcon® export)
  - Tank loading (fhalcon® export)
  - Sampling (fhalcon® analysis)
- Integration into long-term archives
- Displays camera images in the software (fhalcon® analysis, fhalcon® import, fhalcon® export and fhalcon® visualization)

[digital signature]

Digital signature for receipts and documents. Print and archive with a signature.

- Connection of signature pads
- Display of the documents that require signature
- Automatic scroll function if documents exceed the screen size
- Validity check
- Printing of signed receipts
- Archiving of signed receipts

[digitalize shipping documents]

Digitisation of accompanying documents.

- Integration of document scanner or office printer with scan function
- Automatic allocation thanks to clear file names or via the selection screen with preview
- Attachment of scanned documents to the archived receipt

[multilingual truck register]

Driver registration and self-weighing software.

- Available languages displayed as flags
- Selection and saving of the language
- Input of the registration number or automatic determination via number plate identification (number plate identification option)
- Connection of motorised transponder card readers and dispensers
- Issue / Entry of transponder cards
- Connection of signature pad (digital signature option)
- Selection of delivery person / collector or third party
- Selection of the vehicle combination
- Delivery person
  - Input of previous loads
- Collector
  - Input of previous loads
  - Input of previous trips
  - Detailed planning with tank division
  - Tank weight check
  - Overall weight check

fhalcon® truck multilingual truck register: log in and out terminal

[mailing]

Automatic emailing of receipts, documents and statistics.

- Automatic emailing of incoming goods receipts to the supplier and / or delivery person after second weighing
- Automatic emailing of outgoing goods receipts to the customer and / or end customer after the loading process has been completed
- Can choose whether documents are sent or printed by e-mail and paper, only e-mail or only paper in the master data
- Integration into the on-site system structure
- Integration into the on-site email system
- Sending of emails from the programmes
- Automated, time-controlled sending of emails with attachments

[interface]

Seamless integration into your ERP system or other third-party system.

- Import of master data such as
  - People
  - Products
  - Declarations
  - Vehicles
  - Transponder cards
- Import and export of orders
- Export of all receipts
- Export of all movement data
- Standardised and / or customer-specific
- Different forms of communication to third-party systems are supported
  - Online, e.g. through sockets, web services or JSON
  - File-based, e.g. via ASCII, CSV, XML or IDoc
  - Direct exchange via interfaces-databases, for example
- All data exchanged via interfaces can also be entered or maintained manually by dialogues
- Export of the data from the archive system with customisable file names (archive option)

falcon® analysis

Seamlessly integrate your sampling, the laboratory, the analytical devices and your QM (Quality Management) and LIMS (Laboratory Information Management System) into the automation process.

basics

[master data] [process] [statistics]

options

[transponder self-service] [gate management]
[camera integration] [anamenter integration]
[interface] [scan]

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[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® analysis includes:

Qualities:
- Flexible input
- Decimal places
- Unit
- Minimum, maximum and default value
- Versioning
- Can be configured according to the product
  - Acceptance of raw materials
  - Production
  - Sales
- Frequency counter
  - Product and quality-related
  - Loose / bagged goods
  - Truck or ship

[process]

The process-related recording and saving of the qualities and analysis parameters gives you 100% process and product control and guarantees consistent product quality.

- Event-controlled querying of the parameters
- Automatic saving of the parameters through the connection of analytical devices (interface option)
- Validity check and process control
- Notification or malfunction in the event of any deviations
- Check of the minimum and maximum values during inputting
- Default value recommendations
- Event-controlled printing of identification labels
- Number of labels
  - Product-related
  - Person-related
  - Process-related
- Printing and archiving of the parameters
- Adjusted entry booking with the help of quality values
- Notification and additional printouts when frequency counter is reached

[statistics]

All processes are logged and archived. Our statistics module allows you to review and evaluate all processes and movements.

Evaluation options:
- Incoming qualities and analysis values
  - Person-related
  - Product-related
  - Process-related
- Production qualities and analysis values
  - Process-related
  - Product-related

Statistics functions:
- Flexibly configurable
- Filter within lists
- Group within lists
- Sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User and workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print

[transponder self-service]

Transponder card-guided sampling with notification by the truck driver.

- Notification in control room when logging onto the transponder card reader
- Automatic opening of the camera image in the sampling dialogue (camera integration option)
- Approval or notification after sampling
- Supports a wide range of different types of transponder cards and readers
  - Contactless
  - Entry card reader
  - Card dispenser
  - Desktop device
- TCP / IP protocol or comparable
- Check to see whether a valid process exists

fhalcon® analysis transponder self-service: sampling

[gate management]

Access control and opening of gates and doors for admission to site, hoppers, loading lanes or driver's cabs.

- Triggered via transponder cards (transponder self-service option)
- Triggered via automatic number plate identification (number plate identification option)
- Validity check
- Check to see whether a valid process exists, only approved if the process exists or has been allocated

[camera integration]

Action-controlled, process-related display and archiving of camera images.

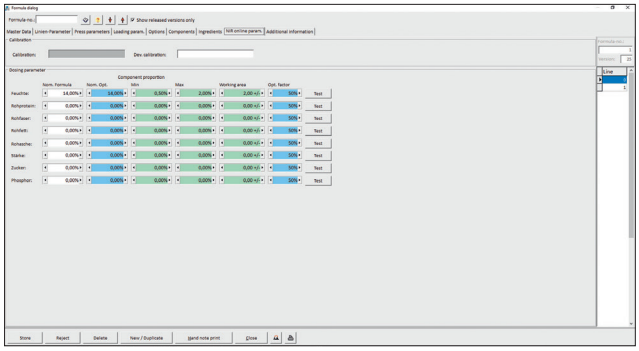
- Archiving of camera images
- Allows for an unattended or driver self-weighing
- Supports a wide variety of different network cameras
- Process-related storage and display for the following processes
  - Weighing with cart scales (fhalcon® truck)
  - Truck loading (fhalcon® export)
  - Receiving hopper (fhalcon® import)
  - Driver's cab for handheld device allocation / handover (fhalcon® export)
  - Tank loading (fhalcon® export)
  - Sampling (fhalcon® analysis)
- Integration into long-term archives
- Displays camera images in the software (fhalcon® truck, fhalcon® import, fhalcon® export and fhalcon® visualization)

[anamenter integration]

There is no alternative to NIR spectroscopy in the modern food and feed production or chemical industry. By connecting to our online system anamenter, you can save time and money and guarantee consistent product quality.

- Interface software for integrating the anamenter
- Input of product-related parameters
- Import of target values from third-party systems (interface option)
- The following parameters, for example, are supported
  - Moisture
  - Crude protein
  - Crude fibre
  - Crude fat
  - Crude ash
  - Starch
  - Sugar
  - Phosphorus
- Regulation and optimisation of parameters in the applicable working areas
- Logging, archiving and comparing of target and actual values
- Automatic export to third-party systems (interface option)

fhalcon® analysis anamenter integration: anamenter integration



fhalcon® analysis anamenter integration: anamenter parameters

[interface]

Seamless integration into your ERP system or other third-party system.

- Import of master data such as
  - People
  - Products
  - Qualities
  - Ingredient values
- Import and export of orders
- Export of all actual quality values
- Export of all actual ingredient values
- Integration of analytical devices such as
  - Laboratory devices for rapid determination
  - NIR devices
  - Scales
  - Determination of number of cases
- Standardised and / or customer-specific
- Different forms of communication to third-party systems are supported
  - Online, e.g. through sockets, web services or JSON
  - File-based, e.g. via ASCII, CSV, XML or IDoc
  - Direct exchange via interfaces-databases, for example
- All data exchanged via interfaces can also be entered or maintained manually by dialogues
- Export of the data from the archive system with customisable file names (archive option)

[scan]

No risk of confusion thanks to scanner-supported sample management.

- A range of different types of scanner can be connected
  - Via the app on Android handheld devices
  - WiFi
  - Cable
  - Radio
- Printing of identification labels with barcode
- Supports 1-D or 2-D codes such as
  - EAN codes
  - Data matrix codes
  - QR codes
- Allocation of unique sample bags
- Laboratory organisation
  - Establishing the uniqueness of the workplace or laboratory with regard to the examined sample

flalcon® import

Maximum flexibility with the highest possibledegree of booking precision: The storage, transfer and removal module with freely configurable route selection is the starting point for all product movements.

basics

[master data] [route] [stock management]
[track and trace] [inventory] [statistics] [archive]

options

[order] [weigh] [finish] [contamination]
[raw material demand] [transponder self-service]
[number plate identification] [remote displays]
[gate management] [camera integration]
[field organisation] [mailing] [interface] [scan]

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[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® import includes:

Personal master data:
- Three-stage address management up to the silo / farm
- Supplier / Delivery person
- Carrier

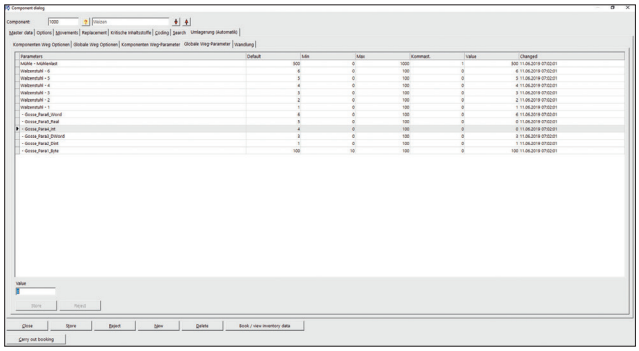
Product master data:
- Components and item master data
- Density
- Minimum stock level
- Machine and processing parameters
- Route parameters
- Product transformation
- Parameter return
- Contamination group

Vehicle master data:
- Vehicle types
- Official registration number
- Weights

Storage and storage space / cell master data:
- Technical dimensions, capacity and volumes
- Minimum stock level
- Approval for filling / emptying
- Approval for the automatic system
- Mixing area for goods tracking and tracing

Transponder master data:
- Card type (day or permanent)
- Validity
- Vehicle allocation
- Person allocation
- Language

User management:
- Module-related
- Can be maintained by the customer
- Logging
- Evaluation



fhalcon® import master data: route parameters

[route]

Freely configurable route selection for starting and managing drive chains: Only the start and end points and options are defined. The route is then automatically calculated with the availabilities being taken into account.

- Order planning
- Fully automatic, configurable and self-learning route control
- Fully automatic stock check
- Automatic mode for the needs-based filling of target cells
- Target cell selection with display of available quantities based on the product density
- Item checking and locking to guarantee purity
- Parallel starts and targets
- Route division
- Specification of target quantities and / or duration
- Flexible decisions (“About”)
- Flexible product-dependent route parameters
- Full indicator bypass
- Harvest mode (top-up with same product)
- Quick start and target cell change
- Drive or conveying route-related carry-over check (contamination option)

[stock management]

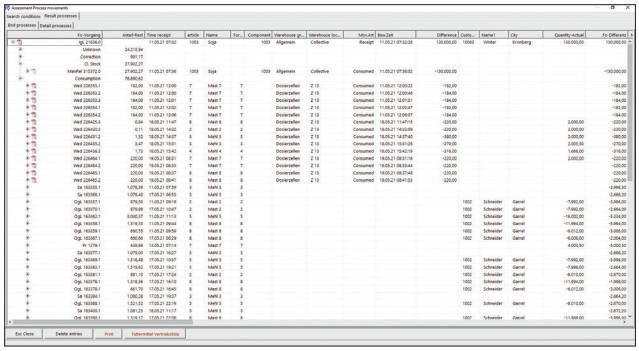
The stock management allows you to maintain an overview of where products and lots are located. This guarantees a smooth production process and forms the basis for effective goods tracking and tracing.

- Stock bookings can be made immediately after the weight has been ascertained
- Direct or process-controlled cell booking
- Product-related
- Storage space-related (e.g. cell, area or space)
- Group-related (can be freely defined and configured)
- Storage location and space-related (e.g. halls)
- Lot-related (bagged goods / piece goods)
- Component and cell inventories
  - Storage space-related
  - Group-related
  - Storage location or storage space-related
  - Lot-related
- Movement lists (each booking with reference)
- Visual inspection and cell cleaning logging with user and flexible warning text
- Graphic inventory
- Minimum stock lists

[track and trace]

Regulatory requirements are becoming increasingly comprehensive and complicated to fill out manually or on paper. Our goods tracking and tracing module supports you at the push of a button. The search works both forwards and backwards, and from one process to another.

- Process-related in all directions
- Lot-related and FiFo (First in First out)
- Gap-free monitoring of stock movements
- Adjustable mixing range to take the mixing behaviour / funnel formation of a silo into consideration
- Address data output for purchases and sales
- Animal feed sales list directly as Excel file incl. all data required by the relevant authorities
  - Address data (supplier / invoice recipient or dealer / delivery address)
  - Delivery date
  - Quantity delivered
  - Type of feed
  - Composition / Structure
  - Commercial name
  - Item number
  - Process number
  - ID number of the lot (all batches involved)
  - Delivery note number
  - Target animal
  - Maximum usage rate in accordance with the directions for use in %
  - Mixed quantity of the component concerned in kg
  - Mixed proportion of the component concerned in %
  - Mixed proportion, according to the formula, of the component concerned in %
  - Follow-up delivery received on
- Direct access to documents stored in the long-term archive
- Display of whether the process that you are looking for has been used or is still in stock
- Direct search for orders / lots



fhalcon® import track and trace: location of incoming goods

[inventory]

Checking your inventory regularly helps to ensure that your stock management is up to date and guarantees the traceability of goods. It also helps you to detect any irregularities and possible product loss.

- Freezing of stock for recalculation later once the inventory has been completed
- Storage space-related (e.g. cell, area or space)
- Lot-related (bagged goods / piece goods)
- Printing of count lists
- Export of count lists
- Storage space group-related count lists

- Checking of issued and returned lists
- Input of free meters for silos for automatic stock calculation based on the cell dimensions and product bulk density
- Quick entry as a list
- Multiple inputs with comparison
- Checklists for finished products and raw materials with comparison of purchases, the produced quantity and sales, incl. a visualisation of the differences
- Comparison of inventories
- Scanner-supported inventory

[statistics]

All processes are logged and archived. Our statistics module allows you to review and evaluate all processes and movements.

Evaluation options:

- Stored quantities
- Transferred quantities
- Removed quantities
- Stock movements
- Storage space movements
- Product movements
- Process movements

Statistics functions:

- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User / workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print
- Reprint receipts

[archive]

Document archiving system for your paperless office. Printed receipts and important logs are automatically saved in the file system.

- The printed receipts are automatically saved as PDF files
- Logs are automatically saved as PDF files
- All process data is automatically saved as XML files
- Several storage locations are used
- Data is saved in a clear, chronological folder structure
- Re-printing is done from the archive
- Automatic archiving after modifications have been made to receipts
- Image archiving (camera integration option)
- Archiving of external documents (scan option and digitalize shipping documents option)
- Automatic sending of receipts (mailing option)
- Archiving with digital signature (digital signature option)
- Import of archive data for third-party systems (interface option)

[order]

How order management works today: You can prevent incorrect information and inputs either via an interface (interface options) or by recording in our system.

- Inputting and management of orders
  - Incoming loose / bagged goods
  - Purchase contracts
  - Outgoing loose / bagged goods
  - Sales contracts
- Quick entry of outgoing loose goods
- Recommendations for farm / silo from previous deliveries
- Automatic, manual or scanner-supported recording of actual purchasing and / or sales quantities (scan option)
- Order or process-related weighing
- Started orders disappear from the pool
- Order tracking
- Filtering and evaluation by person or product
- Contract booking
- Process-related order start by suggesting the first weighing (fhalcon® truck)

[weigh]

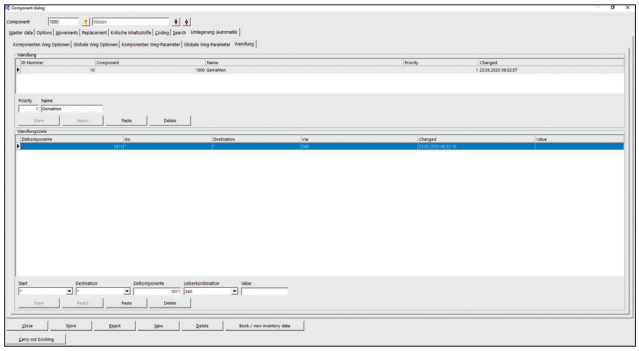
Fully automatic process-related weight determination and booking helps to increase your efficiency and traceability.

- Fully automatic recording, booking and logging of weights and alibi data
- Support of partial quantities, e.g. with cell changes, product transformations or route divisions
- Quick start and target cell change with booking
- The following weight determinations can be configured
  - Elevator weight
  - Tilting scales
  - Container scales
  - Deflecting plates
  - Flowmeter
  - Full indicator
  - Level indicator
  - Manual recording per order
  - Weighbridges (fhalcon® truck)
- Multiple weighings in one trip / order

[finish]

Limitless flexibility: Freely configurable product refinement and transformation.

- Examples of types of refinement / transformations
  - Milling
  - Crushing
  - Drying
  - Cleaning
- Product-related adjustable product transformation with item inspection
- Transformation of the product into multiple products with separate stock management and booking
- Product transformation in automatic mode
- Product-related flexible machine parameters



fhalcon® import finish: product transformation

[contamination]

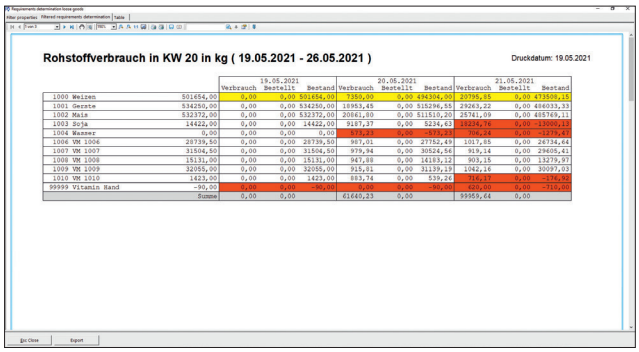
Your monitoring instrument to help you maintain an overview of complex and flexible route options. Drive or conveying route-related carry-over checks, locking by product group.

- Locking by product group
- Definition of critical or non-critical groups
- Allocation of products to groups
- Release or locking of the groups among each other
- Definition of rinsing groups
- Machine-related saving of the conveyed products / processes
- Machine-related check and inspection of the products / processes
- Checking and display of contaminated routes / drives when planning and considering alternatives
- Automatic rinsing
- Inspection and rinsing with automatic transfer
- Inspection and notification when starting by the truck driver (transponder self-service option and number plate identification option)
- Colour display of contaminated routes / drives
- Colour display of critical orders
- Display of the current plant status for each route / drive and each process
- Logging and evaluation

[raw material demand]

Maintain an overview of your raw material needs.

- Back calculation of the material demand based on sales orders
- Loose and bagged goods
- Product-related comparison
  - Consumption on day x
  - Ordered on day x
  - Stock at the end of day x
- 7-day forecast
- Day and overall consumption totals
- Adjustable time range
- Colour highlight if there is insufficient stock



fhalcon® import raw material demand: raw material needs

[transponder self-service]

Transponder card-controlled driver self-service which allows the truck driver to start and manage processes.

- Starting the storage
- Starting the removal
- Automatic cell selection based on approvals and predefined parameters
- Automatic direct cell change with partial quantity booking
- Process-related cell specification
- Harvest mode (top-up with same product)
- Receipt and label printing
- Automatic booking
- Supports a wide range of different types of transponder cards and readers
  - Contactless
  - Entry card reader
  - Card dispenser
  - Desktop device
- TCP / IP protocol or comparable
- Check to see whether a valid process exists
- Information display for readers with display screens
- Opening of gates and doors (gate management option)
- Control of traffic lights and lights
- Holding of transponder cards, as long as the process is running (entry card reader and card dispenser)
- Issuing of day and permanent cards

[number plate identification]

The automated registration / identification of vehicles by their number plate makes the recording and identification process easier.

- Reading out and saving of the read registration number
- Validity check
- Supports a wide variety of different camera types
- Check to see whether the vehicle exists and has been approved
- Check to see whether a valid process exists
- Starting the storage
- Starting the removal
- Automatic cell selection based on approvals and predefined parameters
- Automatic direct cell change with partial quantity booking
- Process-related cell specification
- Harvest mode (top-up with same product)
- Receipt and label printing
- Automatic booking
- Opening of gates and doors (gate management option)
- Suggestion of the read registration number with registration or further processing

[remote displays]

Selection and display on numeric or alphanumeric remote displays.

- Supports a wide range of different types of remote displays
- Flatscreen as display screen
- Integration into the relevant process
- Display of the live data from the processes, such as
  - Registration number
  - Actual quantities
  - Item
  - Tank
- Action-controlled instructions for the driver, such as
  - Raise nozzle
  - Lower nozzle
- Changing, time-controlled display of the information
- Display of the truck order for the loading or unloading sites

[gate management]

Access control and opening of gates and doors for admission to site, hoppers, loading lanes or driver's cabs.

- Triggering via transponder cards (transponder self-service option)
- Triggered via automatic number plate identification (number plate identification option)
- Validity check
- Check to see whether a valid process exists, approved only if the process exists or has been allocated

fhalcon® import gate management: access control

[camera integration]

Action-controlled, process-related display and archiving of camera images.

- Archiving of camera images
- Allows for an unattended or driver self-weighing
- Supports a wide variety of different network cameras
- Process-related storage and display for the following processes
  - Weighing with cart scales (fhalcon® truck)
  - Truck loading (fhalcon® export)
  - Receiving hopper (fhalcon® import)
  - Driver's cab for handheld device allocation / handover (fhalcon® export)
  - Tank loading (fhalcon® export)
  - Sampling (fhalcon® analysis)
- Integration into long-term archives
- Displays camera images in the software (fhalcon® truck, fhalcon® analysis, fhalcon® export and fhalcon® visualization)

[field organisation]

Bring order to the trucks on your site. When the vehicle is registered, it is recorded and sorted into the truck order.

- Organisation of the order using the registration time
- Clear display of the vehicles on your site
- Shift and adjust the order by drag-and-drop
- Assign loading and unloading points
- Display vehicles per loading and unloading point
- Determine and display the average waiting time for the day
- Determine and display the average loading and unloading time for the day
- Lead / Guide the driver via remote display (remote displays option)

[digital signature]

Digital signature for receipts and documents. Print and archive with a signature.

- Connection of signature pads
- Display of the documents that need to be signed
- Automatic scroll function if documents exceed the screen size
- Validity check
- Printing of signed receipts
- Archiving of signed receipts

[mailing]

Automatic emailing of receipts, documents and statistics.

- Automatic emailing of incoming goods receipts to the supplier and / or delivery person after second weighing
- Automatic emailing of outgoing goods receipts to the customer and / or end customer after the loading process has been completed
- Can choose whether documents are sent or printed by e-mail and paper, only e-mail or only paper in the master data
- Integration into the on-site system structure
- Integration into the on-site email system
- Sending of emails from the programmes
- Automated, time-controlled sending of emails with attachments

[interface]

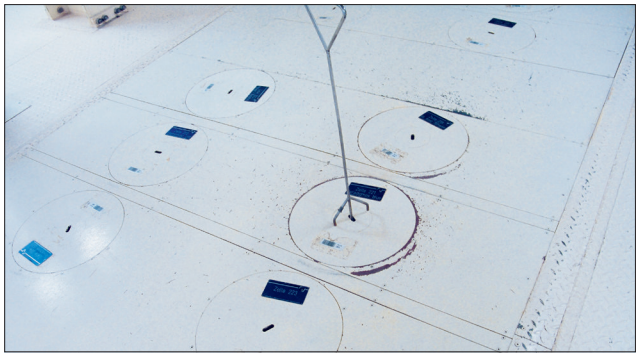
Seamless integration into your ERP system or other third-party system.

- Import of master data such as
  - People
  - Products
  - Vehicles
- Import and export of orders
- Export of all receipts
- Export of all movement data
- Export of all production data
- Standardised and / or customer-specific
- Different forms of communication to third-party systems are supported
  - Online, e.g. through sockets, web services or JSON
  - File-based, e.g. via ASCII, CSV, XML or IDoc
  - Direct exchange via interfaces-databases, for example
- All data exchanged via interfaces can also be entered or maintained manually by dialogues
- Export of the data from the archive system with customisable file names (archive option)

[scan]

Manage your bagged goods just as smoothly as your loose goods. Use our software to process all the movements and processes of your piece goods.

- Piece good cell filling with item inspection and release to the PLC control
- Incoming goods check and recording
- Piece good inventory
- Storage location and space transfer
- Locking of an overbooking
- Stock and validity check
- Lot-related stocks
- A range of different types of scanner can be connected
  - Via the app on Android handheld devices
  - WiFi
  - Cable
  - Radio
- Printing of identification labels with barcode
- Supports 1-D or 2-D codes such as
  - EAN codes
  - Data matrix codes
  - QR codes



fhalcon® import scan: cell filling

falcon® production

Our fully automated production management system makes your day-to-day production much easier. It makes it much more efficient and will save you time and money.

basics

[master data] [planning] [dosing milling mixing]
[pelleting] [stock management] [track and trace]
[inventory] [statistics] [archive]

options

[order] [hand preparation] [contamination]
[raw material demand] [scan] [diagram]
[die and roller management] [ingredient control] [interface]

falcon®
MAXIMUM PRODUCTIVITY & AUTOMATION
Software Suite

[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® production includes:

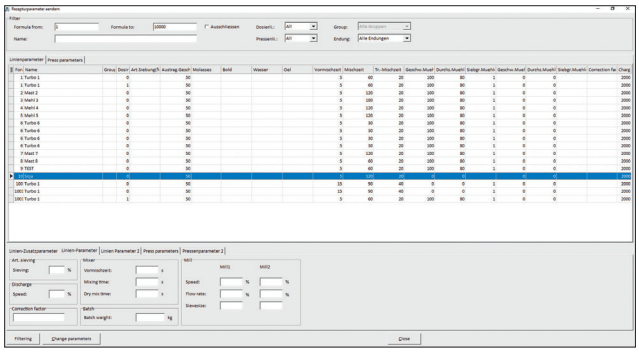
Components / Raw material master data:
- Item allocation
- Minimum stock level
- Density
- Replacement component / Formula
- Ingredients / Critical ingredients
- Process parameters

Formula master data:
- Item allocation
- Versioning
- Density
- Components / Elements of the formula
- Ingredients / Critical ingredients
- Additional data for goods tracking and tracing
- Flexible line-dependent process parameters for the production of meal
- Flexible press line-dependent process parameters for the production of pellets
- Bulk modification of parameters
- Bulk modification of proportions
- Change of components in the formulas

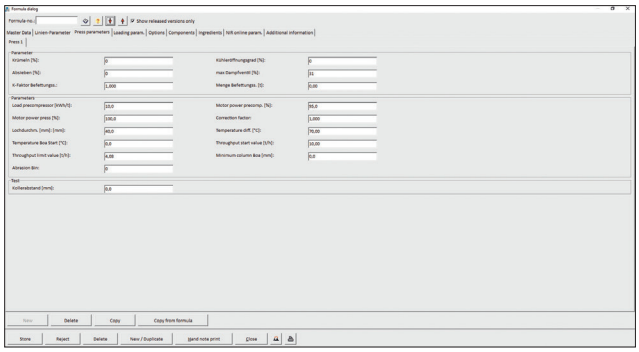
Storage and storage space / cell master data:
- Technical dimensions, capacity and volumes
- Minimum stock level
- Release for filling / emptying
- Release for the automatic system
- Mixing area for goods tracking and tracing
- Dosing parameters
  - Automatic dosing optimisation
  - Dosing levels and switchover point
  - Follow-ups
  - Tolerances
- Dosing equipment allocation (scales or pump)
- Cell block weights

Scales master data:
- Different types of scales
- Weights
- Volumes
- Times
- Resolution and decimal places
- Minimum share
- Intermediate emptying
- Tolerances

User management:
- Module-related
- Can be maintained by the customer
- Logging
- Evaluation



fhalcon® production master data: change line parameters in formulas



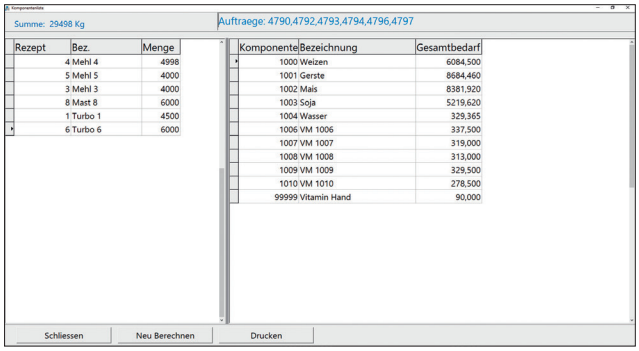
fhalcon® production master data: formula parameters

[planning]

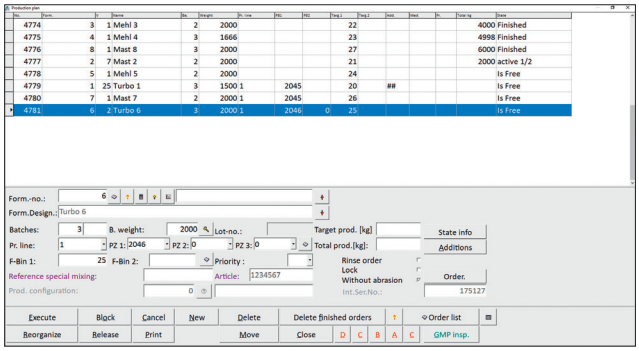
Our production planning simplifies the organisation and utilisation of your production facilities, regardless of whether you are filling up your warehouse, completing orders or producing on a just-in-time basis.

- Minimisation of user input thanks to the intelligent parameter system that has been optimised for the production process
- Direct acceptance and summary of sales orders for production
- Input of additional components or transfer from order
- Carry-over checks are taken into consideration

(contamination option)
- Target cell selection
  - Cells containing identical products
  - Empty cells
  - Coloured display of cells already planned
  - Approved cells
  - Display of the stock and free capacity based on the product density
  - Input of up to 10 target cells in manual or circulating mode
- Direct target test with the input
- Input validity check
- Automatic availability check when scheduling and before production starts
  - Solids to be dosed
  - Liquids with separation, if necessary
  - Manual additions
  - Where applicable, replacement elements / formulas
- Display of the raw material quantities needed
- Automatic calculation of number of batches and quantity
- Approved production plan entries are automatically and consecutively processed
- No further intervention required, all production and process steps start automatically
- Comprehensive information and notification system
  - Formula-related
  - Sales order-related
  - System status and malfunctions
- Pellet production:
  - Selection of the approved press line(s) for this product
  - Input of up to 10 front press cells in manual or circulating mode
  - No further intervention is required to start the pressing process later. If the front press cells have been approved and if the press is in automatic mode, the pressing process and presses start automatically



fhalcon® production planning: production planning needs



fhalcon® production planning: production planning

[dosing milling mixing]

30 years of industry expertise and experience: Meal production has never been easier thanks to our well-designed process control system.

- Fully automatic and asynchronous control of dosing equipment (scales or pumps), mills, crushing roller mills and mixers
- Automatic dosing cell selection based on component allocation and parameters
- Automatic parameter-controlled scale distribution
- Cell and scale-related definition of minimum or maximum quantities to be dosed
- Allocation of cell priorities
- Automatic follow-up optimisation
- Automatic dosing optimisation
- Automatic further dosing
- Display of the current scale / dosing status
- Dosing cell change during the dosing
  - Cross-scale
  - Cross-step
  - Recommendation of cells with identical components
  - Recommendation of cells with replacement components
  - Recommendation of replacement formulas
  - Container change / Switch to manual addition
  - For current batch or for the rest of the lot
- Automatic start cell stock movement
- Automatic movement of container quantities and manual additions
- Tolerance test
  - Single-stage in kg and %
  - Two-stage in kg and % (second stage only after approval by Optimiser / Shift Supervisor)
  - Testing according to a double logarithmic curve
- Tolerance acknowledgement with input and logging of flexible acknowledgement texts

- Automatic underweight acknowledgement with wear components
- Batch adjustment
- Target test
  - Automatic product allocation for empty cells
  - Special mixtures are taken into account
- Automatic target cell booking
- Target cell change
  - Cells containing identical products
  - Empty cells
  - Coloured display of cells already planned
  - Approved cells
  - Display of stock and free capacity based on the product density
  - Input of up to 10 target cells in manual or circulating mode
  - Possible in every step
  - For current batch or for the rest of the lot
  - Change of press line
  - Input of up to 10 front press cells in manual or circulating mode
- Division of liquids between mixer / molasses mixer / press
- Formula and dosing line-related parameters
- Self-learning system, parameters are written back into the formula during the balancing
- Display of all components, manual additions and quantities on the scales and in all steps
- Free definition of manual addition points
- Entire containers are taken into account for manual additions
- Component allocation for manual additions
- Carry-over checks are taken into consideration (contamination option)
- Flexibly configurable and expandable
- Support for
  - up to 99 dosing and mixing lines
  - up to 99 hopper scales per line or mixing line
  - up to 50 pumps per line
- Process-controlled printing of identification labels for retained samples
- Connection of samplers / sampling machines

[pelleting]

Pellet production that is second to none: thanks to the fully automatic press start, with on-the-fly change of the front cell and automatically circulating target cells, you can get the most out of your system.

- Fully automatic pressing process control
- The pressing process is started automatically if the front cells have been approved and if the press is in automatic start mode
- Supports all standard press types
  - BOA
  - Expander
  - Double press
  - Pre-compressor
  - Extruder
  - Vacuum coater
  - Conditioner
- Formula and press line-related parameters
- Self-learning system, parameters are written back into the formula during the balancing
- On-the-fly front cell change
- Target test
  - Automatic product allocation for empty cells
  - Special mixtures are taken into account
- Cyclical front cell movement
- Cyclical target cell booking
- Movement of liquids during the balancing
- Reduction of the actual liquid values in the batch log
- Target cell change
  - Cells containing identical products
  - Empty cells
  - Coloured display of cells already planned
  - Approved cells
  - Display of stock and free capacity based on the product density
  - Input of up to 10 target cells in manual or circulating mode
  - Distribution of the liquids between the press / vacuum coater / target route
- Process-controlled printing of identification labels for retained samples
- Connection of samplers / sampling machines

[stock management]

The stock management allows you to maintain an overview of where products and lots are located. This guarantees a smooth production process and forms the basis for effective goods tracking and tracing.

- Stock bookings can be made immediately after the weight has been ascertained
- Process-controlled cell booking
- Product-related
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- Lot-related (bagged goods / piece goods)
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  - Storage location or storage space-related
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- Graphic inventory
- Minimum stock lists

[track and trace]

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- Process-related in all directions
- Lot-related and FiFo (First in First out)
- Gap-free monitoring of stock movements
- Adjustable mixing range to take the mixing behaviour / funnel formation of a silo into consideration
- Address data output for purchases and sales
- Animal feed sales list directly as Excel file incl. all data required by the relevant authorities
  - Address data (supplier / invoice recipient or dealer / delivery address)
  - Delivery date
  - Quantity delivered
  - Type of feed
  - Composition / Structure
  - Commercial name
  - Item number
  - Process number
  - ID number of the lot (all batches involved)
  - Delivery note number
  - Target animal
  - Maximum usage rate in accordance with the directions for use in %
  - Mixed quantity of the component concerned in kg
  - Mixed proportion of the component concerned in %
  - Mixed proportion, according to the formula, of the component concerned in %
  - Follow-up delivery received on
- Direct access to documents stored in the long-term archive
- Display of whether the process that you are looking for has been used or is still in stock
- Direct search for orders / lots

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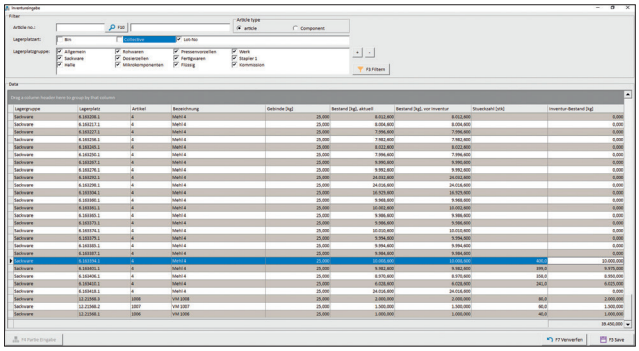

fhalcon® production inventory: lot stock input

[statistics]

All processes are logged and archived. Our statistics module allows you to review and evaluate all processes and movements.

Evaluation options:

- Batch and lot logs
- Press logs
- Component consumption
- Quantity of meal / pellets produced
- Search for components in lots
- Formulas not produced
- Formulas not produced in open orders
- Tolerances
  - Dosing tolerance evaluation
  - Tolerance list
  - Lot tolerances
  - Cell tolerances
- Manual additions
- Ingredients
- Shift logs
- Energy consumption
- Step times
- Stock movements
- Storage space movements
- Product movements
- Process movements

Statistics functions:

- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User / workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
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- Reprint documents

[archive]

Document archiving system for your paperless office. Printed receipts and important logs are automatically saved in the file system.

- The printed receipts are automatically saved as PDF files
- All process data is automatically saved as XML files
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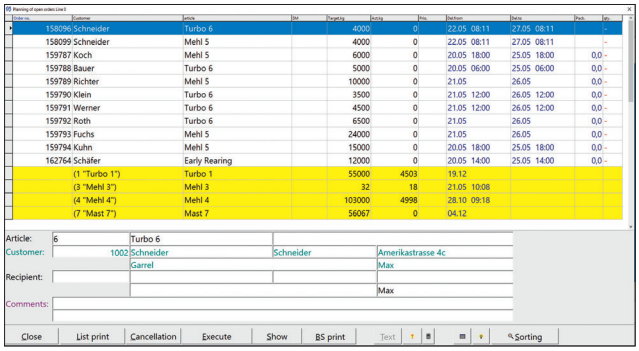
- Data is saved in a clear, chronological folder structure
- Re-printing is done from the archive
- Automatic archiving after modifications have been made to receipts
- Image archiving
- Archiving of external documents (scan option)
- Receipts are sent automatically
- Archiving with digital signature
- Import of archive data for third-party systems (interface option)

[order]

How order management works today: You can prevent incorrect information and inputs either via an interface (interface options) or by recording in our system.

- Inputting and management of orders
  - Incoming loose / bagged goods
  - Purchase contracts
  - Outgoing loose / bagged goods
  - Sales contracts
- Quick entry of outgoing loose goods
- Recommendations for farm / silo from previous deliveries
- Automatic, manual or scanner-supported recording of actual purchasing and / or sales quantities (scan option)
- Order and process-related weighing
- Started orders disappear from the pool
- Order tracking
- Filter and evaluate by person or product
- Contract booking

- Process-related order start by suggesting the first weighing (fhalcon® truck)



fhalcon® production order: order to be produced

[hand preparation]

Integrate manual additive weighing or preparation into your process flow.

- Preparation and weighing of planned production orders
- Batch-specific, component-related recording of the actual quantities
- Preparation in containers / receptacles
  - Buckets
  - Drums
  - Carts
- Assembly of all required products (including full containers)
- Clear identification of the preparation
  - Transponder
  - Barcodes
- Cross-line preparation
- Inspection and control before feeding into the process
- Clear allocation to an accepted lot via barcode or booking according to FiFo (First in First out)
- Lot-related inventory management
- Connection of different types of scales

[contamination]

The control instrument for monitoring and adhering to the defined production sequence always offers you the right option: Simple group locking or ingredient-related projection of the carry-over level.

- Allocation of products to groups
- Definition of the system parts that need to be checked with regards to the carry-over level
  - Dosing or mixing line
  - Mixer
  - Step
  - Press line
  - Target route
  - Press route
  - Cell
- Definition of flushing formulas and non-critical formulas
- Definition of flushing groups and non-critical groups
- Specification of number of flushing batches
- Locking by product group
  - Definition of critical and non-critical groups
  - Release or locking of the groups among each other
- Locking by ingredient level
  - Definition of the concentration of ingredients in components
  - Specification of the maximum residue levels for ingredients and groups
  - Incorporation of data from fhalcon® rom or other operating systems
  - Automatic calculation of the residue level
  - View the current residue levels of the system parts
- Flexible allocation of colours to groups
  - Colour display in the production plan or order list
- Checking during planning, evaluation of the order list and, if necessary, locking during the item inspection
- Recording in batch and press log
- Evaluation of the notifications and locks

[raw material demand]

Maintain on overview of your raw material needs.

- Back calculation of the material demand based on sales orders
- Loose and bagged goods
- Product-related comparison
  - Consumption on day x
  - Ordered on day x
  - Stock at the end of day x
- 7-day forecast
- Day and overall consumption totals
- Adjustable time range
- Highlighted if there is insufficient stock

[scan]

Manage your bagged goods just as smoothly as your loose goods. Use our software to process all the movements and processes of your piece goods.

- Scanner-supported manual additive management
  - Preparation
  - Weighing
  - Addition to product flow
    - Entire container
    - Prepared container / receptacle
- Check and release to PLC control
- Piece good inventory
- Storage location and space transfer
- Locking of an overbooking
- Stock and validity check
- Lot-related stocks
- A range of different types of scanner can be connected
  - Via the app on Android handheld devices
  - WiFi
  - Cable
  - Radio
- Printing of identification labels with barcode
- Supports 1-D or 2-D codes such as
  - EAN codes
  - Data matrix codes
  - QR codes

[diagram]

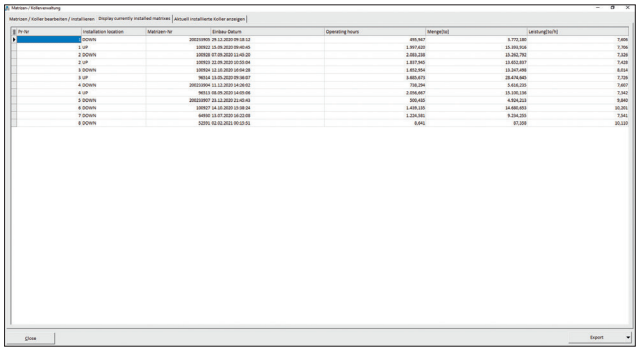
Supplementary logging and archiving of production and process steps for checks performed by authorities or by companies working in the food processing industry.

- Production and process steps such as
  - Mixer diagram
  - Mill diagram
  - Presses diagram
  - Cooler diagram
  - Vacuum coater diagram
- Process-related saving as PDF document
- Process-related display
- Integration into the long-term archive

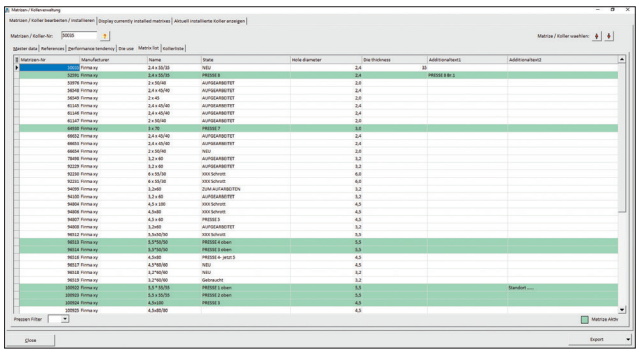
[die and roller management]

Manage and evaluate the technical data, costs and performance of dies and rollers.

- You can manage the following data
  - Name
  - Manufacturer
  - Hole diameter
  - Counter bore
  - Number of holes
  - Costs
  - Roller type
  - Device type
  - Conformity
- Automatically logged data such as
  - Operating hours
  - Pressed quantity
  - Costs per tonne
  - Output
- Easy change
- Overview of the currently installed dies and rollers
- Logging and evaluation



fhalcon® production die and roller management: installed dies



fhalcon® production die and roller management: Die list

[ingredient control]

Improve the quality of your products and avoid unnecessary waiting times. Control and review your production based on the ingredients.

- Component-related specification of the ingredient values
- Formula-related specification of the minimum and maximum authorised ingredient values
- Incorporation of the data from fhalcon® rom or other operating systems
- Batch-related projection of the actual dosed values
- Check of the defined ingredient limit values during the item inspection or before the target route starts
- Logging and evaluation

[interface]

Seamless integration into your ERP system or other third-party system.

- Import of master data such as
  - Formulas
  - Components
  - Ingredients / Critical ingredients
- Export of all movement data
- Export of all production data
- Standardised and / or customer-specific
- Different forms of communication to third-party systems are supported
  - Online, e.g. through sockets, web services or JSON
  - File-based, e.g. via ASCII, CSV, XML or IDoc
  - Direct exchange via interfaces-databases, for example
- All data exchanged via interface can also be manually entered or maintained by dialogues
- Export of the data from the archive system with customisable file names (archive option)

fhalcon® export

No need for an operator: fhalcon® export offers a wide range of options, from driver trip planning, to self-loading via a handheld device with site organisation. Do you need help with the implementation of your projects or process optimisation? We will be happy to advise you!

basics

[master data] [order] [planning] [stock management]
[track and trace] [inventory] [statistics] [archive]

options

[bulk loading] [bag filling] [finish] [handheld loading]
[transponder self-service] [number plate identification]
[remote displays] [gate management] [camera integration]
[field organisation] [digital signature] [mailing] [scan]
[interface]

fhalcon®
MAXIMUM PRODUCTIVITY & AUTOMATION
Software Suite

[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® export includes:

Personal master data:
- Three-stage address management up to the silo / farm
- Supplier / Delivery person
- Carrier

Vehicle master data:
- Vehicle types
- Official registration number
- Weights

Product master data:
- Components and item master data
- Item-related raw material qualities
- Item declarations
- Density
- Material flow analysis values
- Dangerous goods

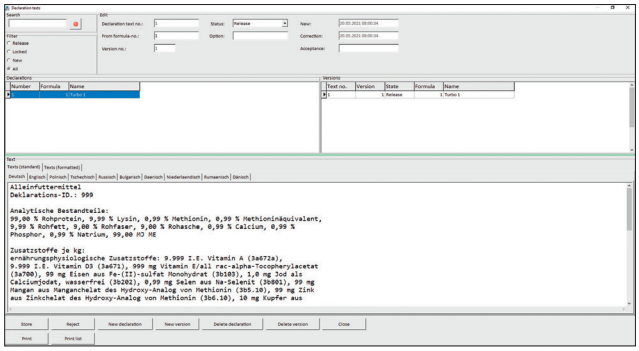
Packaging master data:
- Container item master data
- Bag types
- Bagging programme
- Palletising programme

Storage and storage space / cell master data:
- Technical dimensions, capacity and volumes
- Minimum stock level
- Approval for filling / emptying
- Approval for the respective track / system
- Follow-up parameters
- Dosing levels
- Mixing area for goods tracking and tracing

Transponder master data:
- Card type (day or permanent)
- Validity
- Vehicle allocation
- Person allocation
- Language

Other master data:
- Ships
- Shipping methods
- Types of freight
- Palletising programme

User management:
- Module-related
- Can be maintained by the customer
- Logging
- Evaluation



fhalcon® export master data: item declaration

[order]

How order management works today: You can prevent incorrect information and inputs either via an interface (interface options) or by recording in our system.

- Inputting and management of orders
  - Incoming loose / bagged goods
  - Purchase contracts
  - Outgoing loose / bagged goods
  - Sales contracts
- Quick entry of outgoing loose goods
- Recommendations for farm / silo from previous deliveries
- Automatic, manual or scanner-supported recording of actual purchasing and / or sales quantities (scan option)
- Order or process-related weighing
- Weighed orders disappear from the pool
- Order tracking
- Filter and evaluate by person or product
- Contract booking

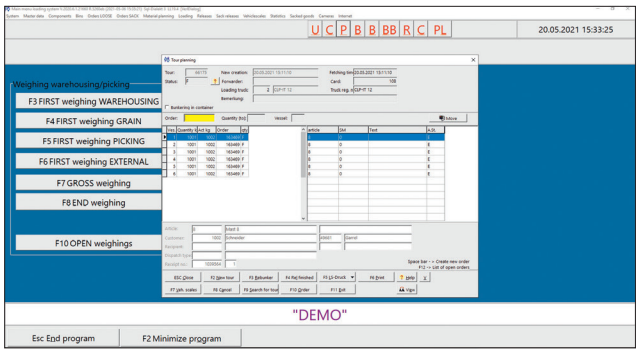
[planning]

Our trip planning simplifies the organisation and utilisation of your loading lanes, bagging plants and big bag stations, regardless of whether you are filling up your warehouse, completing orders or producing on a “just-in-time” basis.

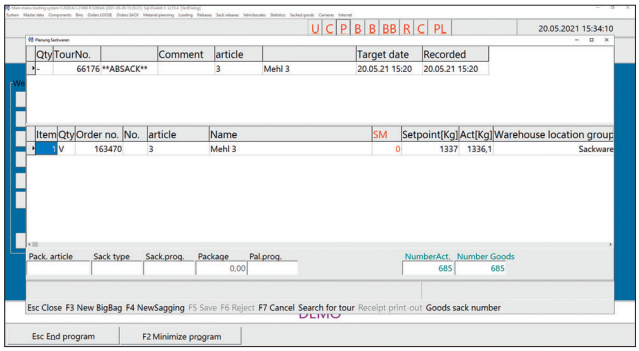
- Planning for loose loading lanes and truck loading with bagged goods
  - Planning based on the sales orders that are already in the system
  - Rough planning for trucks
    - Multiple trips per truck and day
    - Allocations of orders to trucks
    - Specified time slot
    - Truck capacities from the master data are taken into account
  - Detailed planning for trucks
    - Tank-related quantity planning
    - Tank quantity check
    - Tank volume check
    - Check of the authorised total weight
  - Driver trip planning
    - Triggered by transponder cards (transponder self-service option)
    - Recommendations from roughly planned trips
    - Pre-filtering of orders to plan using personal master data
  - Availability check
  - Display or printing of loading plans
  - Allocation of transponder cards (transponder self-service option)
  - Allocation of handheld devices (handheld loading option)
  - Requests for check weighing (fhalcon® truck)
    - No delivery note with difference x in kg or %
- Possible modes:
  - Trip counter
  - Each truck
  - Manual selection

    Process-controlled printing of identification labels for retained samples

    Connection of samplers / sampling machines
    - Sample checking
    - Pre-freight checks for truck trips
    - Cleaning declaration
- Planning for bagging systems and big bag stations
  - Planning based on sales orders that are already in the system
  - Compilation as a trip
  - Based on start cell allocation
  - Based on produced lots
  - Based on weight or quantity
  - Automatic position generation



fhalcon® export planning: loading trip



fhalcon® export planning: piece goods trip

[stock management]

The stock management allows you to maintain an overview of where products are located and stock levels. This guarantees a smooth production process and forms the basis for effective goods tracking and tracing.

- Stock bookings can be made immediately after the weight has been ascertained
- Process-controlled cell booking
- Product-related
- Storage space-related (e.g. cell, area or space)
- Group-related (can be defined and configured freely)
- Storage location and space-related (e.g. halls)
- Lot-related (bagged goods / piece goods)
- Component and cell inventories
  - Storage space-related
  - Group-related
  - Storage location or storage space-related
  - Lot-related

- Movement lists (each booking with reference)
- Visual inspection and cell cleaning logging with user and flexible warning text
- Graphic inventory
- Minimum stock lists

[track and trace]

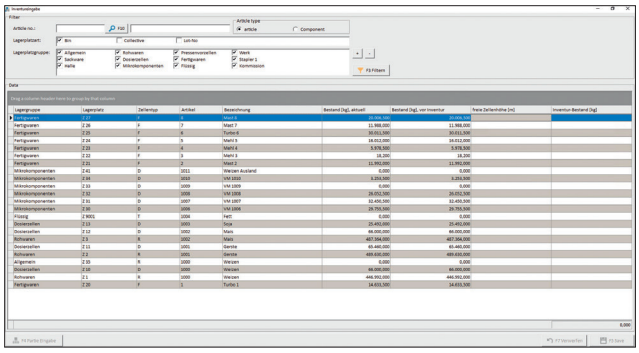
Regulatory requirements are becoming increasingly comprehensive and complicated to fill out manually or on paper. Our goods tracking and tracing module supports you at the push of a button. The search works both forwards and backwards, and from one process to another.

- Process-related in all directions
- Lot-related and FiFo (First in First out)
- Gap-free monitoring of stock movements
- Adjustable mixing range to take the mixing behaviour / funnel formation of a silo into consideration
- Address data output for purchases and sales
- Animal feed sales list directly as Excel file incl. all data required by the relevant authorities
  - Address data (supplier / invoice recipient or dealer / delivery address)
  - Delivery date
  - Quantity delivered
  - Type of feed
  - Composition / Structure
  - Commercial name
  - Item number
  - Process number
  - ID number of the lot (all batches involved)
  - Delivery note number
  - Target animal
  - Maximum usage rate in accordance with the directions for use in %
  - Mixed quantity of the component concerned in kg
  - Mixed proportion of the component concerned in %
  - Mixed proportion, according to the formula, of the component concerned in %
  - Follow-up delivery received on
- Direct access to documents stored in the long-term archive
- Display of whether the process that you are looking for has been used or is still in stock
- Direct search for orders / lots

[inventory]

Checking your inventory regularly helps to ensure that your stock management is up to date and guarantees the traceability of goods. It also helps you to detect any irregularities and possible product loss.

- Freezing of stock for recalculation later once the inventory has been completed
- Storage space-related (e.g. cell, area or space)
- Lot-related (bagged goods / piece goods)
- Printing of count lists
- Export of count lists
- Storage space group-related count lists
- Checking of issued and returned lists
- Input of free meters for silos for automatic stock calculation based on the cell dimensions and product bulk density
- Quick entry as a list
- Multiple inputs with comparison
- Checklists for finished products and raw materials with comparison of purchases, the produced quantity and sales, incl. a visualisation of the differences
- Comparison of inventories
- Scanner-supported inventory



fhalcon® export inventory: cell stock input

[statistics]

All processes are logged and archived. Our statistics module allows you to review and evaluate all processes and movements.

Evaluation options:
- Stored quantities
- Transferred quantities
- Removed quantities
- Stock movements
- Storage space movements
- Product movements
- Process movements

Statistics functions:
- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User / workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print
- Reprint receipts

[archive]

Document archiving system for your paperless office. Printed receipts and important logs are automatically saved in the file system.

- The printed receipts are automatically saved as PDF files
- All process data is automatically saved as XML files
- Several storage locations are used
- Data is saved in a clear, chronological folder structure
- Re-printing is done from the archive
- Automatic archiving after modifications have been made to receipts
- Image archiving (camera integration option)
- Archiving of external documents (scan option and digitalize shipping documents option)
- Automatic sending of receipts (mailing option)
- Archiving with digital signature (digital signature option)
- Import of archive data for third-party systems (interface option)

[bulk loading]

Minimise waiting and downtimes of trucks with our fully automatic loading control. It has been be optimised in terms of performance and speed and can be intuitively controlled by the truck driver during the self-loading process.

- Supports all standard constructions
  - Tilting scales
  - Container cart
  - Filling bunker scales
  - Cart scales with movable trough chain conveyor
  - End-of-line mixer
  - Direct loading with weighing using cart scales (fhalcon® truck)
- Starts the loading process
  - Transponder-controlled (transponder self-service option)
  - Registration number identification (number plate identification option)
  - Handheld devices (handheld loading option)
  - Driver self-service terminal in loading lane
- Opening of gates and doors (gate management option)
- Tank-related archiving of images (camera integration option)
- Clear display of all approved loading lanes for this workstation
- Automatic start cell selection based on the product allocation
- Customer orders / extra manufacturing taken into consideration
- Automatic follow-up calculation
- Product-related subsequent loading
- Automatic follow-up and performance optimisation
- Automatic further dosing
- Allocation of cell priorities
- Various different sortings to optimise the order
- Start cell selection during the loading
  - Automatic for material shortages
  - Rapid (without follow-up time, if identical routes)
  - Recommendation of cells with identical products
  - Recommendation of cells with alternative products
- Target quantity adjustment during the loading
- Display of the current status
- Tolerance acknowledgement
- Comprehensive information, notification and alert system
  - System status and malfunctions
- Pre-bunker filling and transfer of stock
  - Fully automatic target cell search and selection
    - Spacing of the truck tanks
    - Spacing of nozzles
    - Swivel range taken into account
  - Definition of desired containers

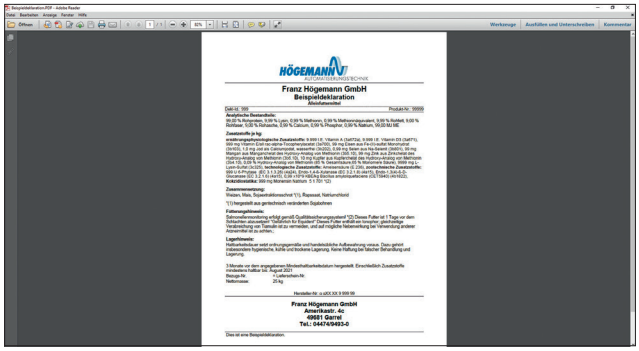
  - Target test with automatic product allocation for empty cells
  - Automatic transfer of pre-bunker stock
    · Start via GPS coordinates (fhalcon® dispose)
    · Start via loading time
- Saving or printing of alibi data
- Weighing on lanes with truck scales (fhalcon® truck)
- Printing of or direct emailing (mailing option) of receipts with signature (digital signature option) for each process
  - Flexible layouts
  - Integration of logos or letterheads
  - Person or product-related layouts / printer
- Printing of delivery notes with declaration
- Printing of delivery notes
  - Directly after loading
  - At a central point, for example at the delivery note printing station via transponder card identification
  - Automatically after transponder-controlled check weighing (fhalcon® truck)

[bag filling]

Seamlessly integrate the manufacturing of bagged goods and filling of big bags into your automation concept.

- Automatic or push-button start
- Bagging programme management and transfer to the PLC
- Palletising programme management and transfer to the PLC
- Clear display of all approved stations for this workplace
- Printing of labels, bag attachers with logos, declaration
- Printing of dangerous goods labels
- Printing of pallet slips
- Printing of weighing notes or delivery notes with declarations
  - Flexible layouts
  - Integration of logos or letterheads
  - Person or product-related layouts / printer
- Automatic stock management
  - Creation of lot accounts with stock
  - Sales entries
  - Dispatch in the form of starting products, pallets and bags
- Saving or printing of alibi data

fhalcon® export bag filling: container filling



fhalcon® export bag filling: example declaration

[finish]

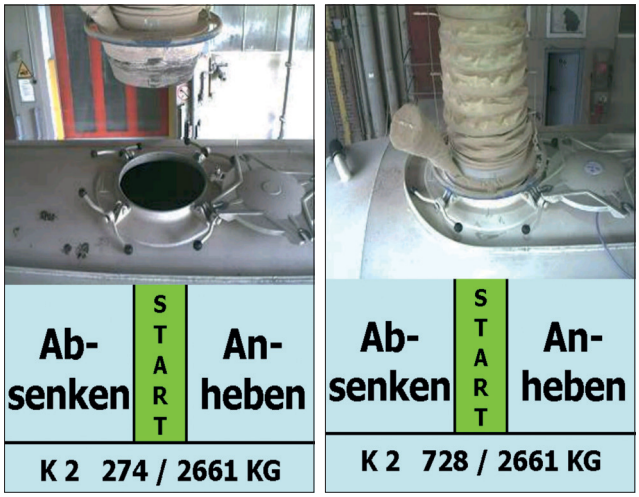
Limitless flexibility: mix during the loading

- Mixing with moveable scales
- Addition of liquids
- Addition of raw materials, such as wheat
- Mixing in truck tank
- Mixing in the pre-bunker or transfer container
- Management of end-of-line mixers
- Management of manual additions in the loading area

[handheld loading]

Intelligent loading solutions: Let the truck driver control loading from the cab.

- Allocation of handheld devices for trip planning
- Start the trip via the handheld device
- Display of the camera image (camera integration option)
- Raise and lower the nozzle
- Move the trough chain conveyor
- Display the actual weight
- Weighing via a handheld device
- Comprehensive information, notification and alert system
  – System status and malfunctions
- Delivery note printed when handheld device is returned



fhalcon® export handheld loading: tank loading upper and lower nozzles

[transponder self-service]

Transponder card-controlled driver self-service which allows the truck driver to start and manage processes.

- Loading can be started via transponder cards
- Delivery notes can be printed via transponder cards
- Check to see whether a valid process exists
- Information display for readers with display screens
- Opening of gates and doors (gate management option)
- Control of traffic lights and lights
- Holding of transponder cards, as long as the process is running (entry card reader and card dispenser)
- Allocation of day and permanent cards
- Automatic printing with signature (digital signature option) after second weighing
- Receipt and label printing
- Automatic booking
- Supports a wide range of different types of transponder cards and readers
  – Contactless
  – Entry card reader
  – Card dispenser
  – Desktop device
- TCP / IP protocol or comparable

fhalcon® export transponder self-service: operator terminal

[number plate identification]

The automated registration / identification of vehicles by their number plate makes the recording and identification process easier.

- Reading out and saving of the read registration number
- Validity check
- Supports a wide variety of different camera types
- Check to see whether the vehicle exists and has been approved
- Check to see whether a valid process exists
- Loading is started automatically
- Opening of gates and doors (gate management option)
- Suggestion of the read registration number with registration or further processing

[remote displays]

Selection and display on numeric or alphanumeric remote displays.

- Supports a wide range of different types of remote displays
- Flatscreen as display screen
- Integration into the relevant process
- Display of the live data from the processes, such as
  - Registration number
  - Actual quantities
  - Item
  - Tank
- Action-controlled instructions for the driver, such as
  - Raise nozzle
  - Lower nozzle
- Changing, time-controlled display of the information
- Display of the truck order for the loading or unloading sites

[gate management]

Access control and opening of gates and doors for admission to site, hoppers, loading lanes or driver's cabs.

- Triggered via transponder cards (transponder self-service option)
- Triggered via automatic numberplate identification (number plate identification option)
- Validity check
- Check to see whether a valid process exists, approved only if the process exists or has been allocated

[camera integration]

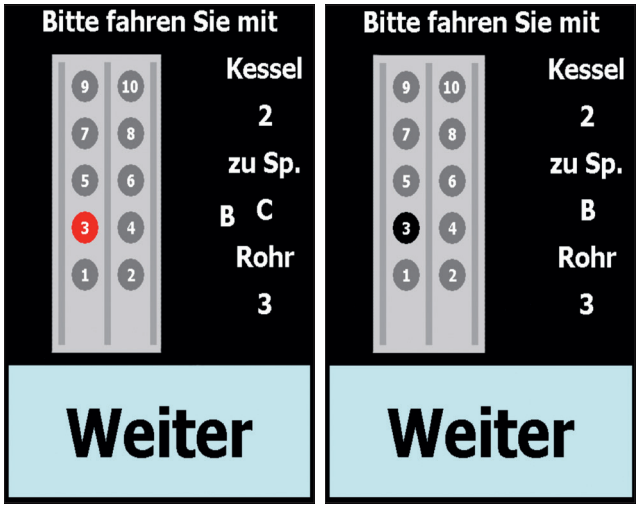
Action-controlled, process-related display and archiving of camera images.

- Archiving of camera images
- Allows for an unattended or driver self-weighing
- Supports a wide variety of different network cameras
- Process-related storage and display for the following processes
  - Weighing with cart scales (fhalcon® truck)
  - Truck loading (fhalcon® export)
  - Receiving hopper (fhalcon® import)
  - Driver's cab for handheld device allocation / handover (fhalcon® export)
  - Tank loading (fhalcon® export)
  - Sampling (fhalcon® analysis)
- Integration into long-term archives
- Displays camera images in the software (fhalcon® truck, fhalcon® analysis, fhalcon® export and fhalcon® visualization)

[field organisation]

Bring order to the trucks on your site. When the vehicle is registered, it is recorded and sorted into the truck order.

- Organisation of the order using the registration time
- Clear display of the vehicles on your site
- Shift and adjust the order by drag-and-drop
- Assign loading and unloading points
- Display vehicles per loading and unloading point
- Determine and display the average waiting time for the day
- Determine and display the average loading and unloading time for the day
- Lead / Guide the driver via remote display (remote displays option)



fhalcon® export field organisation: lane entry

[digital signature]

Digital signature for receipts and documents. Print and archive with a signature.

- Connection of signature pads
- Display of the documents that need to be signed
- Automatic scroll function if documents exceed the screen size
- Validity check
- Printing of signed receipts
- Archiving of signed receipts

[mailing]

Automatic emailing of receipts, documents and statistics.

- Automatic emailing of outgoing goods receipts to the customer and / or end customer after the loading process has been completed
- Can choose whether documents are sent or printed by e-mail and paper, only e-mail or only paper in the master data
- Integration into the on-site system structure
- Integration into the on-site email system
- Sending of emails from the programmes
- Automated, time-controlled sending of emails with attachments

[scan]

Manage your bagged goods just as smoothly as your loose goods. Use our software to process all the movements and processes of your piece goods.

- Commissioning of piece goods
  - Bag trip-related
  - Sales order-related
- Transfer or reserve stock in the commission warehouse
- Removal after sale or truck loading
- Printing of delivery notes
  - Directly after loading
  - At a central point, for example at the delivery note printing station via transponder cards
  - Automatically after transponder-controlled check weighing (fhalcon® truck)
- Piece good inventory
- Storage location and space transfer
- Locking of an overbooking
- Stock and validity check
- Lot-related stocks
- A range of different types of scanner can be connected
  - Via the app on Android handheld devices
  - WiFi
  - Cable
  - Radio
- Printing of identification labels with barcode
- Supports 1-D or 2-D codes such as
  - EAN codes
  - Data matrix codes
  - QR codes

[interface]

Seamless integration into your ERP system or other third-party system.

- Import of master data such as
  - People
  - Products
  - Vehicles
  - Packaging master data:
  - Information about dangerous substances / goods
- Import and export of orders
- Import and export of trips
- Export of all receipts
- Export of all movement data
- Export of all production data
- Standardised and / or customer-specific
- Different forms of communication to third-party systems are supported
  - Online, e.g. through sockets, web services or JSON
  - File-based, e.g. via ASCII, CSV, XML or IDoc
  - Direct exchange via interfaces-databases, for example
- All data exchanged via interface can also be entered or maintained manually by dialogues
- Export of the data from the archive system with customisable file names (archive option)

fhalcon® energy

Optimising your energy consumption has never been easier than with fhalcon® energy. Thanks to the individually configurable dashboard, you can maintain an overview of the production process at all times, immediately identify energy-intensive processes and benchmark against other production sites.

basics

[master data] [template] [monitoring]
[process] [statistics]

options

[mailing]

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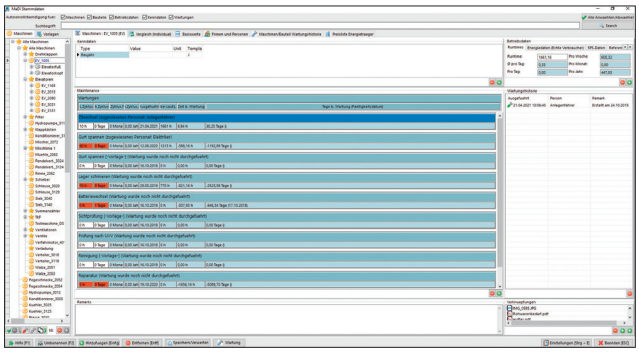
Software Suite

[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® energy includes:

- The creation and copying of machines, components and structuring nodes
- Clear presentation as a tree structure
- Free assignment, maintenance and allocation of characteristics
- Addition of links to, for example,
  - Technical documents
  - Component drawings
  - Replacement part lists
  - Websites
- Full-text search within the master data
- First delivery is done with templates and master data of all drives from the visualisation(fhalcon® visualization)
- Comparison of master data
- Free assignment, maintenance and allocation of price lists in the consumption unit, for example
  - Electricity
  - Gas
  - Fuel oil
- Parametrisation of the drive-related operating data acquisition for the following data
  - Runtime
  - Energy
  - Process reference

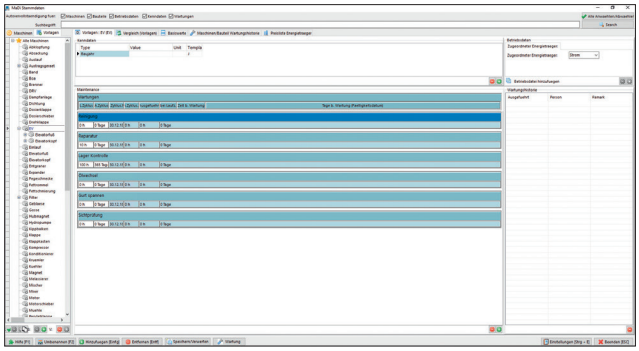


fhalcon® energy master data: master data management

[template]

Master data for identical machines can be maintained with a template. This ensures simple, quick and effective maintenance of components, characteristics and energy sources.

- Automatic master data maintenance by inheriting the template for this type of machine
  - Components
  - Characteristics
  - Maintenance
- Customisation of the machine through modifications to inherited data
- Template-related allocation of energy sources



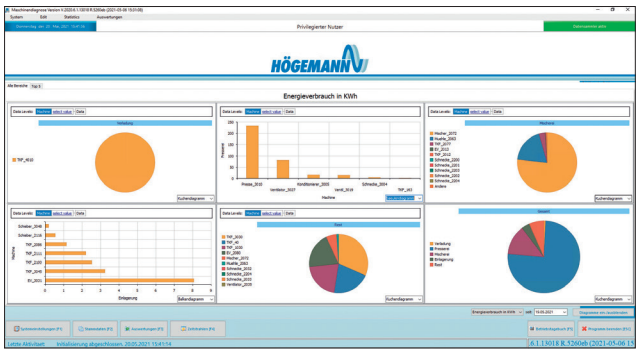
fhalcon® energy master data: template management

[monitoring]

Let the system take care of your energy monitoring. All energy data is determined and saved in relation to the drive and the processes.

- Drive-related allocation of energy meters
- Process-related saving of energy consumption
- Display of the average consumption of the machine
- Formula editor
- Storing of formulas for the process and time-related distribution of non-drive-related energies
- Storing of factors for drive-related weighting of distributed energies
- Area-related diagram display on the start screen
  - Energy
  - Runtime
- Top 10 list for energy or runtime

- Energy storage and evaluation
  – Machine-related
  – Area-related (fhalcon® import, production and export)
  – Process-related (fhalcon® import, production and export)
- Product-related evaluation and comparison of energy consumption, tonnage, runtimes and output
- Determination and representation of the energy consumption in kWh
  and kWh/t
- Determination and representation of energy costs in € and €/t based on price lists
- Day and area-related overall view with the following key figures: t, kWh, kWh/t, €, €/t

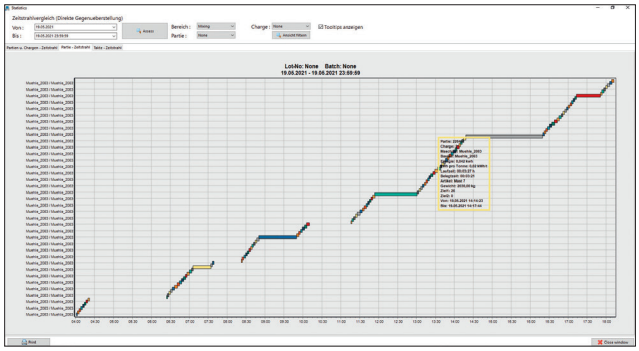


fhalcon® energy monitoring: start screen

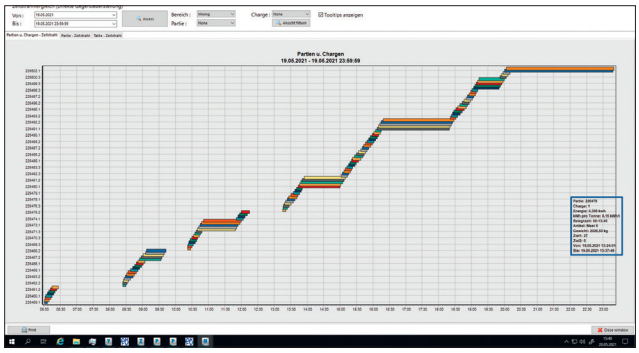
[process]

The process-related logging of machine runtimes takes your system optimisation to a new level.

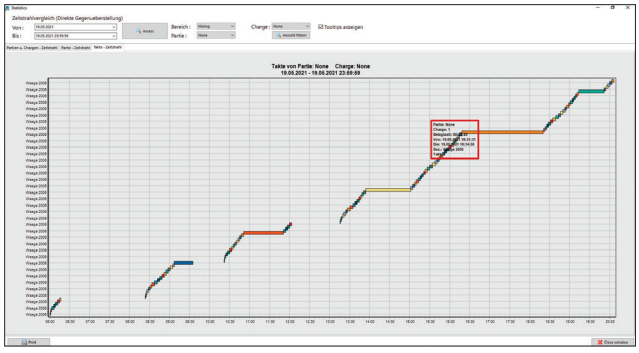
- Process-related saving of the running and occupancy times of each drive / each machine
- Representation and comparison of the actual runtimes and the time, for which the drive was reserved for a process
- Process-related evaluation of the drives involved
- Subsequent analysis of the drives used for a process / lot (fhalcon® import, production and export)
- Display and filtering of additional process-related values (fhalcon® import, production and export)
- Subsequent analysis and display on a timeline with switchable filters
  – Process and batch-related
  – Drive-related
  – Step-related
- Display of process details incl. energy consumption



fhalcon® energy process: drive timeline



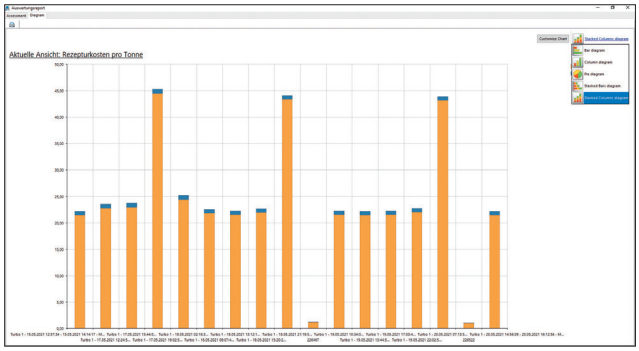
fhalcon® energy process: batch timeline



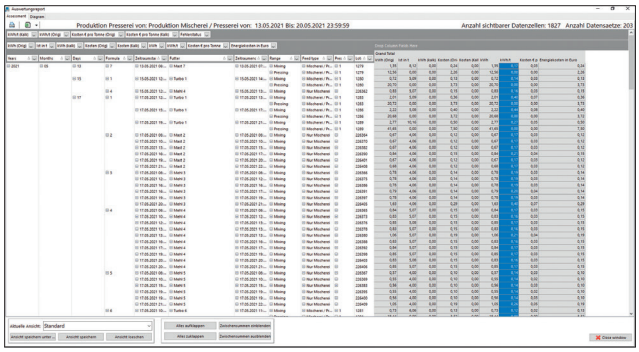
fhalcon® energy process: step timeline

[statistics]

All the recorded energy data, machine data, components and characteristics can be evaluated, exported or automatically emailed by our powerful statistics module.



fhalcon® energy statistics: flexible diagram



fhalcon® energy statistics: overall production

Evaluation options:

- Machines
- Components
- Operating data overview
- Operating data log
- Energy data incl. costs (fhalcon® import, production and export)
  - Storage and transfer
  - Mixing plant
  - Pressing plant
  - Loading
  - Without reference
  - Totals
- Production data incl. energy and costs (fhalcon® import, production and export)
  - Acceptance
  - Transfer
  - Mixing plant production
  - Pressing plant production
  - Mixing / pressing plant production
  - Loading

Statistics functions:

- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User / workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print

[mailing]

Automatic emailing of logs, lists and statistics.

- Automatic emailing
  - Energy data / energy consumption lists incl. costs
  - Production data incl. energy consumption and costs
  - Operating data logs
- Integration into the on-site system structure
- Integration into the on-site email system
- Sending of emails from the programmes
- Automated, time-controlled sending of emails with attachments

flalcon® maintenance

Maintain an overview of your fleet, any upcoming maintenance and your documentation. With our maintenance software you can save valuable time and reduce downtimes.

basics

[master data] [template]
[service] [statistics]

options

[process] [mailing]

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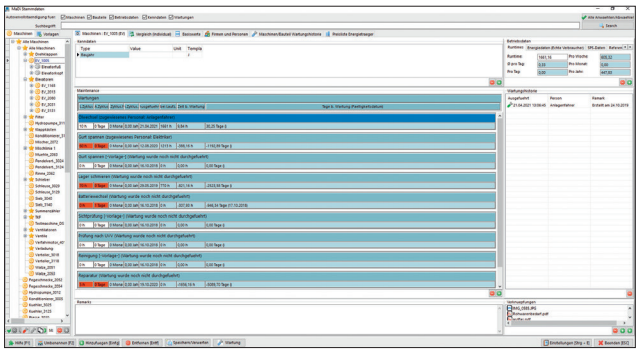
[master data]

The foundation and starting point for all fhalcon® modules is always the master data. The most important data for fhalcon® maintenance includes:

- The creation and copying of machines, components and structuring nodes
- Clear presentation as a tree structure
- Free assignment, maintenance and allocation of characteristics
- Addition of links to, for example,
  - Technical documents
  - Component drawings
  - Replacement part lists
  - Websites
- Full-text search within the master data
- First delivery is done with templates and master data of all drives from the visualisation (fhalcon® visualization)
- Comparison of master data
- Free assignment, maintenance and allocation of maintenance
- Free assignment, maintenance and allocation of companies and people
- Parametrisation of the drive-related operating data acquisition for the following data
  - Runtime
  - Process reference (process option)

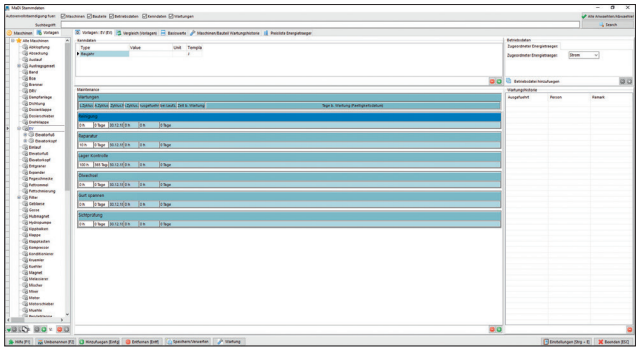


fhalcon® maintenance master data: master data management

[template]

Master data for identical machines can be maintained with a template. This ensures a simple, quick and effective maintenance of components, characteristics and energy sources.

- Automatic master data maintenance by inheriting the template for this type of machine
  - Components
  - Characteristics
  - Maintenance
- Customisation of the machine through modifications to inherited data
- Template-related maintenance and inheritance of maintenance
- Template-related allocation of energy sources



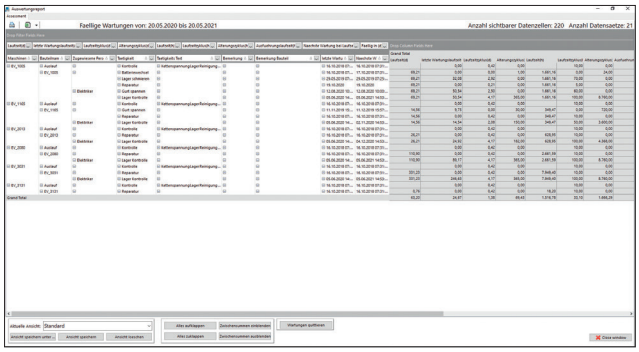
fhalcon® maintenance template: template management

[service]

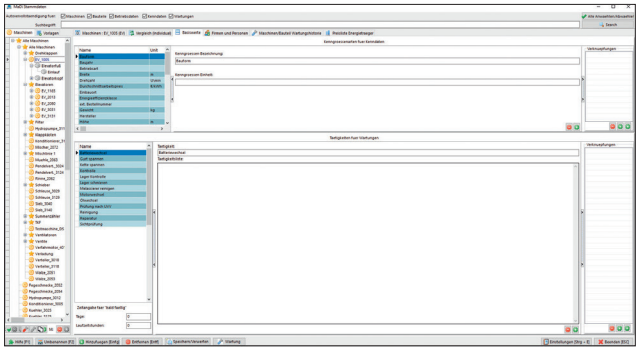
Reduce downtimes caused by unforeseeable defects: Preventative and precautionary maintenance helps you to ensure maximum machine availability.

- Input and maintenance of machine and component-related maintenance
- Specification of the maintenance due date as a runtime cycle (the actual running time of the machine is logged through the operating data acquisition, maintenance is due after the actual working hours)
- Specification of the maintenance due date via the ageing cycle (maintenance is due after x days)
- Display and storage
  - Date that the maintenance was performed
  - Runtime for maintenance performance

  - Runtime until maintenance
  - Days until maintenance
  - Maintenance history
- Allocation of people or companies to maintenance
- Positive acknowledgement of maintenance with logging of the date, person and any comments
- Negative acknowledgement of maintenance (acknowledgement is positive but maintenance task still outstanding)
- Display of due and soon-to-be due maintenance in the master data tree
- Extensive filter options and flexible list design to determine what maintenance is due
- E-mails sent automatically for due maintenance or maintenance or operating data logs (mailing option)



fhalcon® maintenance service: due maintenance



fhalcon® maintenance service: characteristics and maintenance

[statistics]

All machine data, components and characteristics, as well as due or acknowledged maintenance can be evaluated, exported or automatically e-mailed with our powerful statistics module.

Evaluation options:

- Machines
- Components
- Due maintenance
- Maintenance logs
- Operating data overview
- Operating data log (process option)
- Production data (process option and fhalcon® import, production and export)
  - Acceptance
  - Transfer
  - Mixing plant production
  - Pressing plant production
  - Mixing / pressing plant production
  - Loading

Statistics functions:

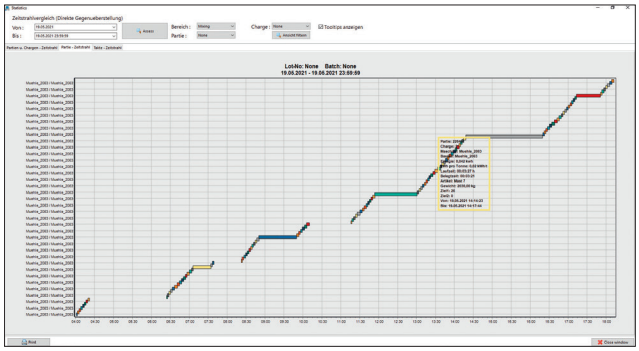
- Flexibly configurable
- Filter, group and sort within lists
- Display or hide columns
- Adjust the width and order of the columns
- Totals and subtotals
- User / workstation-related, freely configurable list layouts
- Direct export to Excel or other formats
- Print

[process]

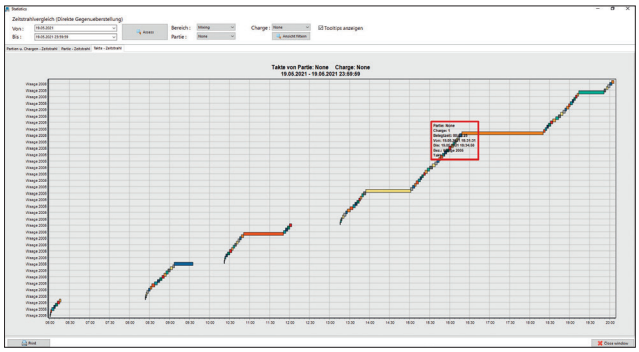
Our process-related logging of machine runtimes takes your system optimisation to a new level.

- Process-related saving of the running and occupancy times of each drive / each machine
- Representation and comparison of the actual runtimes and the time that the drive was reserved for a process
- Process-related evaluation of the drives involved
- Subsequent analysis of the drives used for a process / lot (fhalcon® import, production and export)

- Display and filtering of additional process-related values (fhalcon® import, production and export)
- Subsequent analysis and display on a timeline with switchable filters
  - Process and batch-related
  - Drive-related
  - Step-related
- Display of process details



fhalcon® maintenance process: drive timeline



fhalcon® maintenance process: step timeline

[mailing]

Automatic emailing of logs, lists and statistics.

- Automatic emailing
  - Due maintenance
  - Maintenance logs
  - Operating data logs
- Integration into the on-site system structure
- Integration into the on-site email system
- Sending of emails from the programmes
- Automated, time-controlled sending of emails with attachments

fhalcon® visualization

Does your visualisation lack intuitive operation and additional information? Then we have the solution for you: fhalcon® visualization leaves nothing to be desired.

basics

[route] [drive]
[statistics] [interface]

options

[diagram] [scan]

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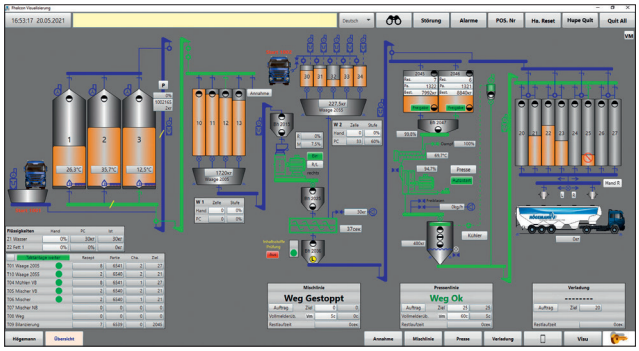
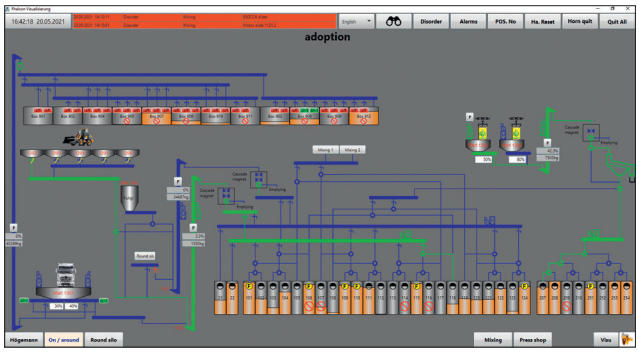
[route]

Our process visualisation is second to none: Plant operators are optimally supported by the seamless integration into the other modules.

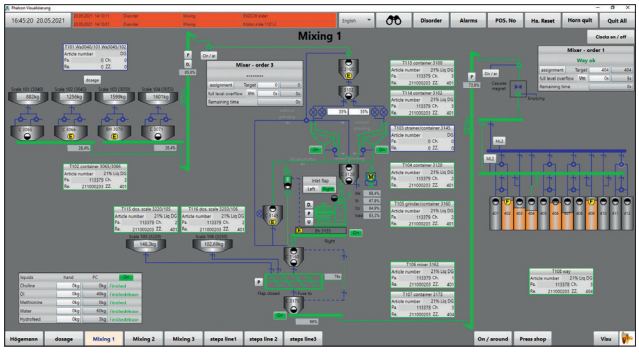
- Fully scalable
- Pop-up when malfunctions occur
- Malfunctions per plant area / workstation incl. display of the reason for the malfunction (with TIA incl. input or output signal)
- Intuitive colour system
  - Flashing → Drive in manual
  - Blue → Initial state
  - Green → Drive started in automatic mode
  - Yellow → Drive in manual and requested by automatic
  - White → Drive ready
  - Orange → Drive paused
  - Orange / Yellow → Drive paused with material
  - Red → Automatic mode malfunction
- Multi-user
- User management to drive level with groups and roles, as well as logging
- Search for drives
- Information system for storing information on drives
- Display of data from the fhalcon® modules (import, production and export)
  - Graphic display of the cell stock level based on the capacity and current stock status
  - Cell details
    - Stock
    - Capacity
    - Product
    - Visual inspection date
    - Cleaning date
  - Visual illustration
    - Cell release or locking
    - Cell must be cleaned or run empty
- Powerful diagram module
  - Switching on and off of signals
  - Freely selectable time slot
  - Diagrams, such as
    - Presses
    - Mills
    - Crushing roller mills
- Fading in and out of position numbers
- Logging of all user activities and malfunctions



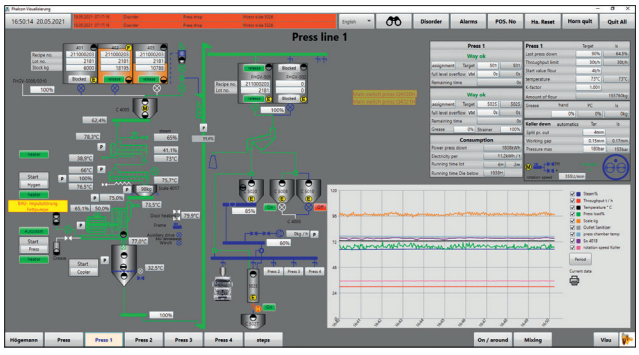
fhalcon® visualisation route: example of entire plant



fhalcon® visualisation route: storage



fhalcon® visualisation route: mixing plant

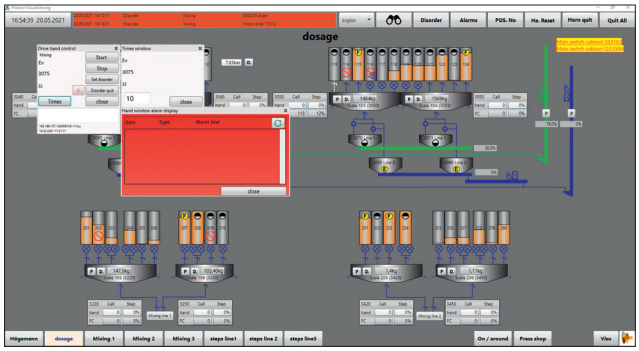


fhalcon® visualisation route: presses

[drive]

Each drive and machine has a detail window with additional parameters and functions.

- Name, number and internal number
- Functions
  - Manual
  - Auto
  - Start (left / right)
  - Stop
  - Malfunction acknowledgement
- Follow-up times can be entered
- Display of the last malfunctions
  - Date
  - Type
  - Alarm text



fhalcon® visualisation route: elevator

[statistics]

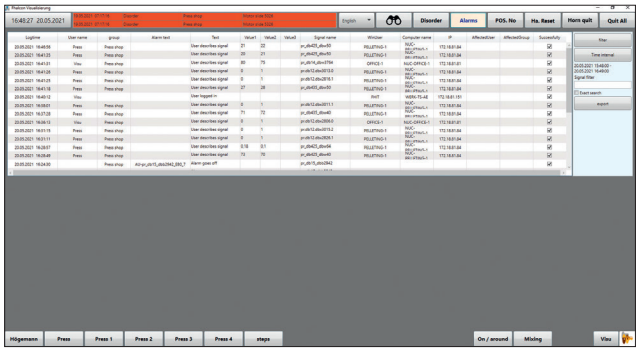
All user activities, malfunctions and alarms can be evaluated and exported via our powerful statistics module.

Evaluation options:

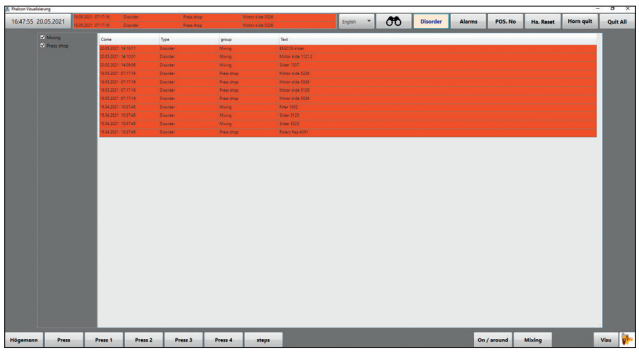
- Malfunctions with detailed information, incl.
  - Log time
  - Users and job titles
  - Group
  - Alarm text
- Alarm frequency as a diagram

Statistics functions:

- Flexibly configurable
- Filter, group and sort within lists
- Direct export to Excel or other formats
- Print



fhalcon® visualisation statistics: alarms



fhalcon® visualisation statistics: malfunctions

[interface]

Limitless visualisation: Transfer additional data from the fhalcon® import, production and export modules via an online interface.

- Cell data, such as
  - Product allocation
  - Stock
  - Capacity
  - Release or locking
  - Cleaning intervals
  - Emptying intervals
  - Approval for automatic transfer
  - Information from temperature monitoring systems
- Acceptance data, such as
  - Item
  - Truck registration number

[diagram]

All data is available in the background. Let the system help you with your problem analyses! We can also help to you to create diagrams quickly and easily.

- Control diagram
  - Liquid dosing
  - Solid dosing
- Scales diagram
  - Weight
  - Dosing capacity
  - Dosing cell
- Direct export to Excel
- Print

[scan]

Smart operability that sets new standards: Operate your plant or individual drives wirelessly.

- Create and scan drive-related barcodes on the screen
  - Drive window on handheld device / smartphone
  - Operation for service staff (incl. external staff)
  - Operation via WiFi
  - Information required
    - User
    - Name
    - Drive
    - Duration
    - Validity
- System equipment, important areas or individual machines with barcodes for mobile operation on site

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