TEWE ELEKTRONIC®

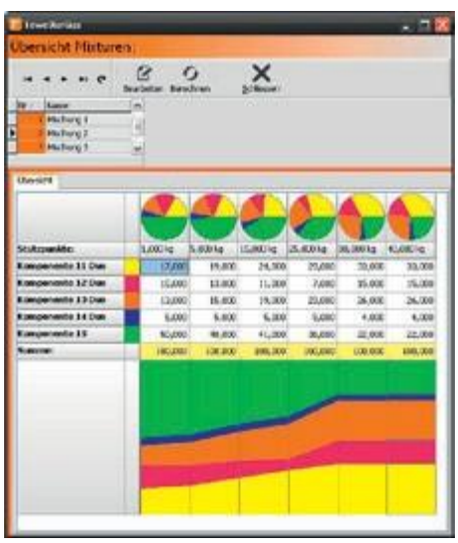
TEWESTAR 6 2018

... SMART TECHNOLOGY FOR YOUR LIVESTOCK.

MIXTURE INPUT

NEW 2018

- Easier input of an unlimited number of phases for all feeding systems
- Optimised display of mixtures optionally covering the entire fattening period or partial sections
- Dynamic selection and display of the required components - non-required components are not displayed
- Simple rearrangement oe component sequence
- Temperature preselection for mixtures (fermentation/PigStart)



VALVE INFO WINDOW

NEW 2018

- Valve display in the table grid with indication of the valve number and number of feedings already carried out during the day, colour visualisation for a quick overview of the valve consumption:

red :	below 40%
orange :	40 - 60 %
yellow:	60 - 80 %
green:	80 - 100%
lieght green:	more than 100 %

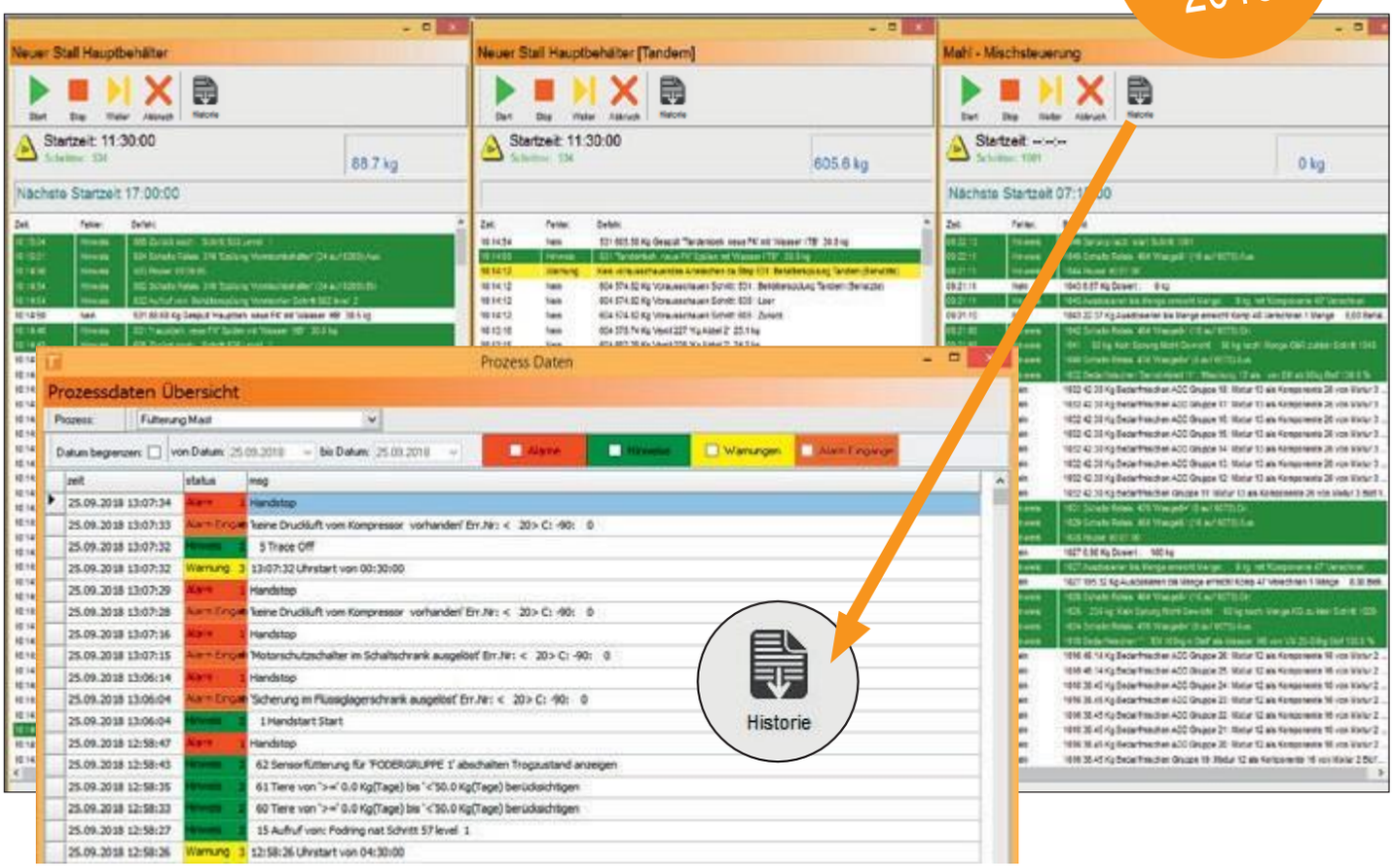
- Bar chart with target/actual value of the valve selected in the overview
- General information about the fed animals at the selected valve as well as information on the possible manual correction value.

3 day review possible

PROCESS DATA OVERVIEW

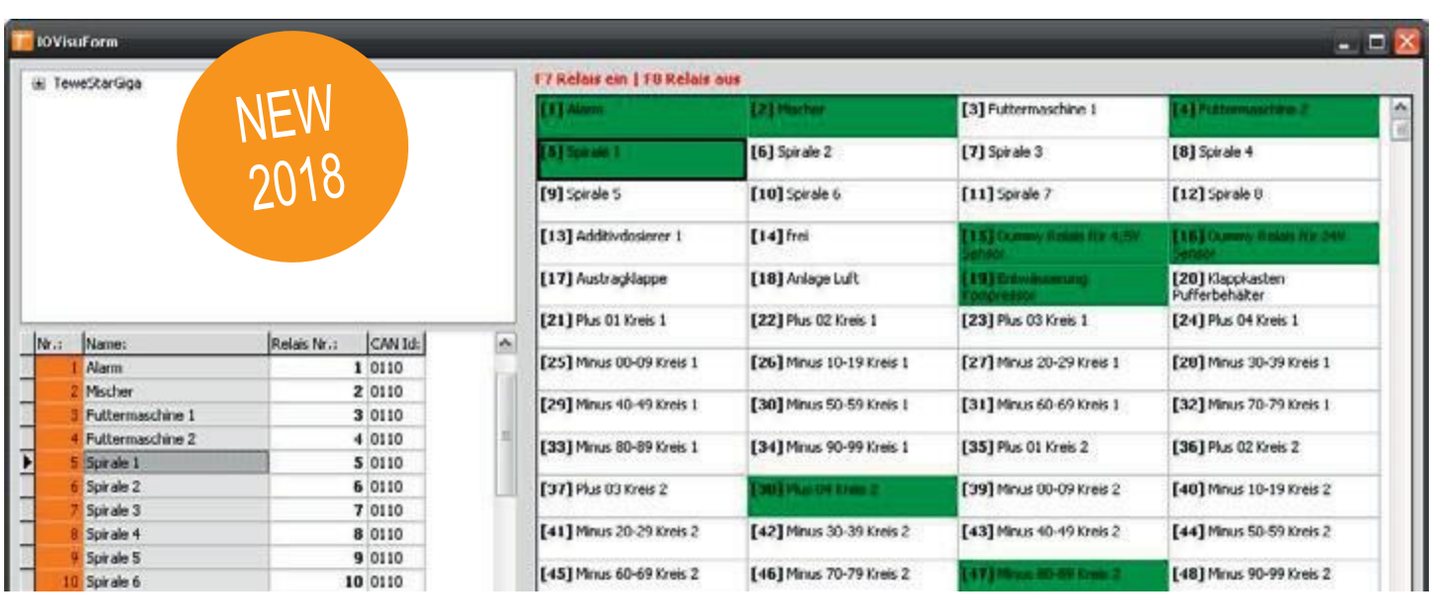
NEW 2018

- Data history with selection function for alarms, messages, alerts and external alarms as well as various filter options such as date limitation or process selection.



PROCESS DATA OVERVIEW

- Window to manually switch relays on and off
- Switched relays are highlighted in green, regardless of whether they are switched manually or via the TEWESTAR software.



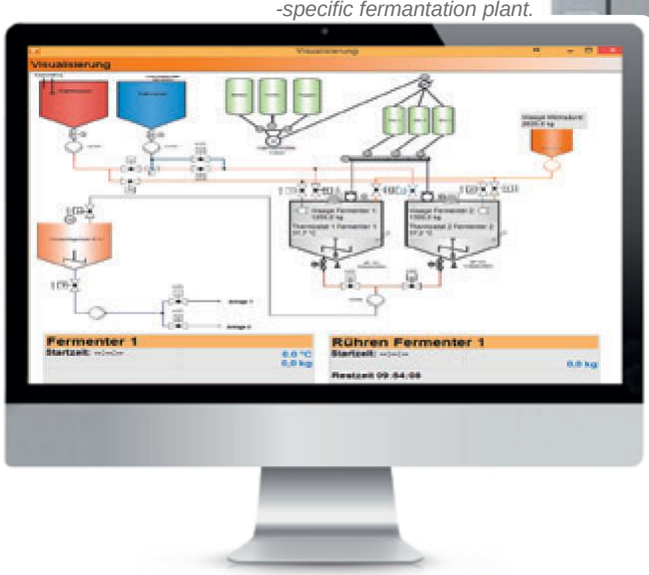
HARDWARE BASIC EQUIPMENT/OPTIONS

TECHNICAL DATA

- 2 pcs. 2.5" solid state hard disk (electronic hard disk, no mechanical parts)
- USB port (6 pieces)
- RJ-45 interface (for fixed network connection) (10 / 100 / 1000 MBit/s)
- connection for 2 screen 1 x VGA connection, 1 x HDMI connection,
- Dust and humidity protected steel housing, IP65
- Online UPS supported system: TEWESTAR is automatically shut down in case of power failure.
- Up to 3 backup paths for automatic data backup
- Daily automatic data backup with weekly review
- Simple expansion options through dynamic adaptation (e.g. number of valves).)
- Calendar function with alarm message
- Query and triggering of autarkic memory programmable controllers (PLCs)
- Combination with different types of systems such as liquid feeding with meal/mix or liquid feeding with dry feeding possible
- Parallel processes (simultaneous feeding possible)
- Automatic stock accounting
- Clear fattening evaluation
- Individual process image visualisation and ustomisation
- Simple visualisation of photos, map or pipe plan
- Easy coupling via LAN or WLAN
- Change of national language
- Free designation of all important data columns Parallel
- scanning for feeding time control or block menu feeding
- Simple step programming
- Simple and manual relays control incl. vizualisation **NEW 2018**
- Coupling relay with switch-on and switch-off delay
- Simple control of external systems via potential-free relay contact
- Input via touch screen (optional function) Feed
- curves with freely programmable limit value
- ISOagriNET interface
- Fiscal business split
- Delivery note creation
- Anticipatory mixing (multi-tank technology) Alarm
- function for unauthorised stable access
- Simplified mixture input **NEW 2018**

MAXIMUM SYSTEM EXPANSION

- up to 2000 feeding valves
- up to 100 feed groups
- up to 20 mixing tanks
- up to 10 feed curves (based on animal age) plus up to 10 feed curves (based on animal weight)
- up to 20 weighing systems
- up to 50 mixtures (liquid feeding) up to 50 mixtures (dry feeding) > 100 mixtures (Grind/Mix) up to 50 silos
- up to 10 gain curves



Visualization of a customer -specific fermantation plant.

Easytronic CAN-Bus controlled (HW24)

CAN-MODULES

Modern automation technology is defined by an increasing decentralisation of processing functions via bus systems. The use of modern bus technology instead of conventional connection technologies ensures greater flexibility of systems with regard to changes and expansions and also offers considerable savings potential with regard to project planning and installation costs (flexibility with regard to feeding technology: simple expansion, e.g. by adding CAN nodes for containers, operating stations, valves, sensors). The CAN (Controller-Area-Network) bus is a system widely used in industry for networking decentralised intelligent control components.

A CAN bus system is characterised by: simple 2-wire installation, the possibility of realising long cable lengths and a large number of CAN nodes, high operational reliability and low-priced system components. For this reason, TEWE Elektronic has decided to use this system combined with a large number of self-developed system-compatible CAN nodes for the special requirements in agriculture and feeding technology. The TEWE Elektronic CAN bus system can be used to implement any system configuration. The modules (CAN nodes) developed by TEWE Elektronic with their various functions are described on this page.

NEW 2018

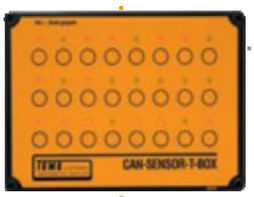
CAN – MVD 16 *(HW26)*
Scale and thermometer in one unit, required for weighing and/or temperature display of containers (for liquids), for connection of load cells, pressure transducer and digital temperature sensor.
Replacement for CAN scale (HW3) and ThermoControll (HW4)

CAN-S/V-BOX *(HW5)*
Max. 8 valves and 8 sensors.
Connection: each via 2-wire cable

CAN-VALVE-BOX *(HW6)*
Max. 24 feed valves. Connection: each via 2-wire cable. Alternatively: without valve box via matrix on relay card!

NEW 2018

CAN-SENSOR-BOX MASTER *(HW16)*
Max. 24 sensors for liquid or dry feeding. **In combination with HW6 = HW21**



CAN-SENSOR T-BOX
As Can-Sensor-Box Master, but with 24 buttons and LEDs for manual simulation of the trough status

CAN-ANIMAL SCALE *(HW3)*
Connection of 4 weighing bars of an animal scale. The weighing results can be stored directly in a table on the TEWESTAR.

CAN-EASY MIX *(HW23)*
Dry feeding method – phase intersection of up to 6 components in the feed line – (no weighing system necessary).

CAN-FC1000/FC5000 *(HW2)*
CAN BUS Control card for plugging onto the FC5000 main board in order to integrate the FC5000 into a CAN BUS network..

CAN-control card *(HW1)*
Installed in the switch cabinet for controlling max. 128 relays,126 inputs and 2 pulse counters. (sufficient for max. control of 8 relay cards with 16 relays each).

TEWESTAR smart 6 –

Demand-driven design

TEWESTAR smart 6 comes up with a multitude of innovations:

The new design of the user interface under HTML 5 allows for the unified access and data display of TEWESTAR when using end devices that do not work with Microsoft Windows, such as Android, Mac OS, etc. In addition, the interface ideally adapts to the screen format of the used output used (tablet, smartphone, etc.). Consequently the previously necessary applications and their system-related limitations are no longer necessary.
Another highlight is the now realised administrative access authorisation on the TEWESTAR, which facilitates the assignment of rights to different users. The operating and setting options can thus be individually defined for users with different tasks. Due to the new design, the assignment of rights is automatically transferred to the accessing end devices.

A few examples:
In a password-protected program, the system operatior (administrator) can assign the rights tot he user(s).

The user „A“ for example, ist o be responsible for stable 1 with valves numbered 1-50. Thus the administrator unlocks valves numbered 1-50 for this user. Likewise the corresponding columns oft he valve data can be released individually. In addition, other data groups such as component data, mixtures, etc can also individidually be released or blocked. User „B“ is respondible for stable 2 with valve numbers 51-100. The administrator can thus release the valves 21-100 for user „B“ as described. The administrator can thus generate an individual mask with access authorization for each user.

Regardless of these new possibilities, the TEWESTAR smart 6 version can also be operated and worked with in the tried and tested manner. Smart 6 permits the uncomplicated transition of operation from the previous versions to the new design.

EDIT VALVES

To edit the valve data, double-click on any field of the valve line to be changed in the valve overview. This will call up the editing mode. Now the selected data can be changed in the sections released by the administrator. The arrows < and > next to the valve number can be used to switch between the individual valves. The target/actual valve consumption for the current day and the last 3 days is also displayed in this screen.

PROCESS FLOW

Administrator is shown here in a simplified version. Well-known functions such as Start, Stop, Continue and Cancel can still be executed by means of the corresponding buttons.

DATA GROUPS

After login to the assigned system, the user can only see the data groups that have been assigned by the administrator in the menu overview and can only operate with these data groups.

VISUALIZATION HOME

Easy Mix

Airfeed

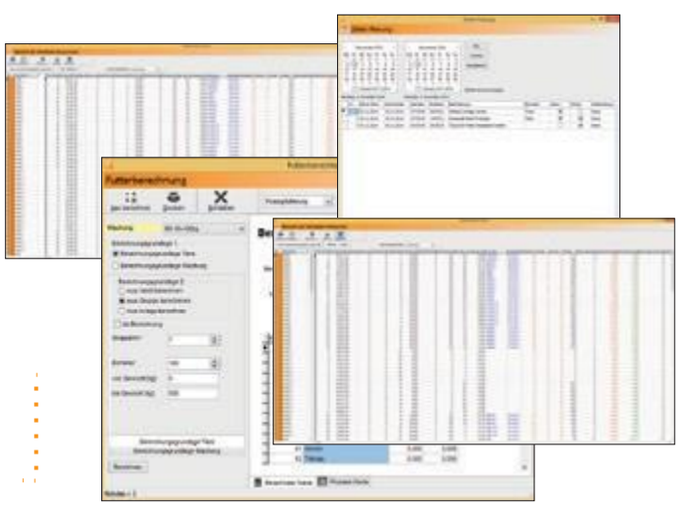
Batch feeding

Pig Start

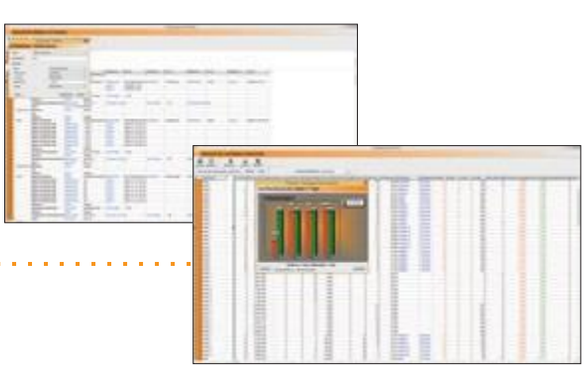
New graphic visualisation and user interface for the TEWESTAR. The intuitive and simple operation leads to a quick overview of the work processes of mixing stations with Airfeed, batch systems and the Easy-Mix process. All important information for the daily process flow can be seen at a glance..

WITH VISUPROFESSIONAL TO THE FEED CONTROL STATION

The user can individually display and compile a large number of queries and database information using the extended Visuprofessional software. Our studies, investigations, surveys and evaluations have revealed that fatteners, for example, use the programme functions in a different way than e.g. piglet producers do. The smart 6 version of TEWE Elektronic now also provides the option of customising the program interface as standard.



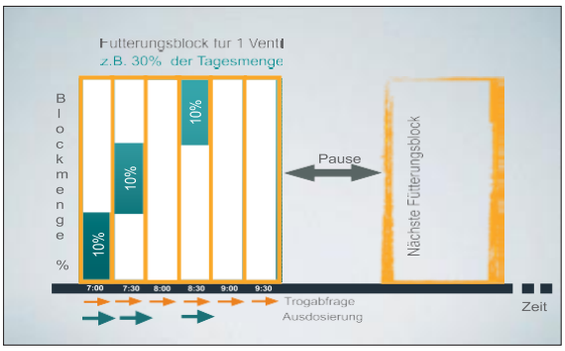
Important customer-specific data groups can be summarised on one screen screen mask.



USEFUL UTILITIES

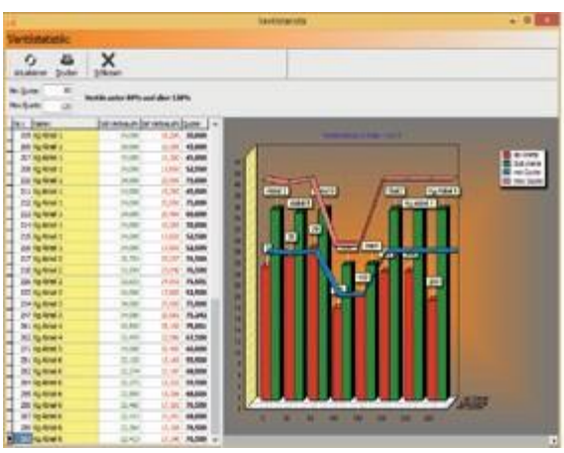
BLOCK FEEDING ON EMPTY STATUS

Here, the animals are fed on empty status within an adjustable time (freely defined time unit from/to). This means that the trough query is started in parallel to the first feeding and that the trough states of the feeding valves is constantly checked. As soon as the minimum mixing quantity (in relation to empty troughs) is reached, the corresponding empty troughs will be refilled. This process is repeated in the set time frame and with the specified maximum dosing quantity..



VALVE STATISTIC QUICK CHECK

Successful animal production also means quick access to the data relevant for production. As a representative example of a multitude of other comparative data, we would like to mention the possibilities of a quick and informative overview of the target/actual consumption data for individual or groups of feed valves. For this purpose, the plant manager enters the shortfall in % that is tolerable and acceptable due to various influences. All valves for which the target deviation was not reached are listed in a table (which can also be printed out). This enables the farm manager to check critical pens before his first tour of the barn. Due to the prompt and up-to-date detection of deviations in production, necessary measures are taken at an early stage and correction costs that would otherwise arise are reduced..



TIME PLANNING

Now with daily, weekly, monthly and yearly repeat function.

NEW 2018

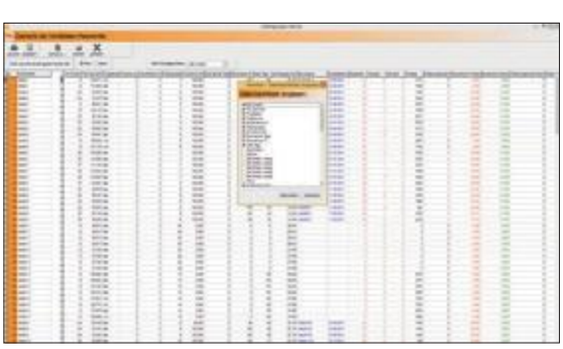
Thanks to a bidirectional calendar function between the iPhone and the TEWE STAR, daily planning and scheduling is now paperless. Appointments entered on the iPhone are automatically displayed on the TEWESTAR when the time is reached and inform the farm manager on the screen with the desired news on a daily basis. The same is done on the iPhone, iPad or remotely networked computers with TEWESTAR connection (Internet or W-Lan).

SHOW AND HIDE MENUS

In all important data groups of TEWESTAR, the actual number of data required/desired for the respective operation can be freely compiled via selection windows..

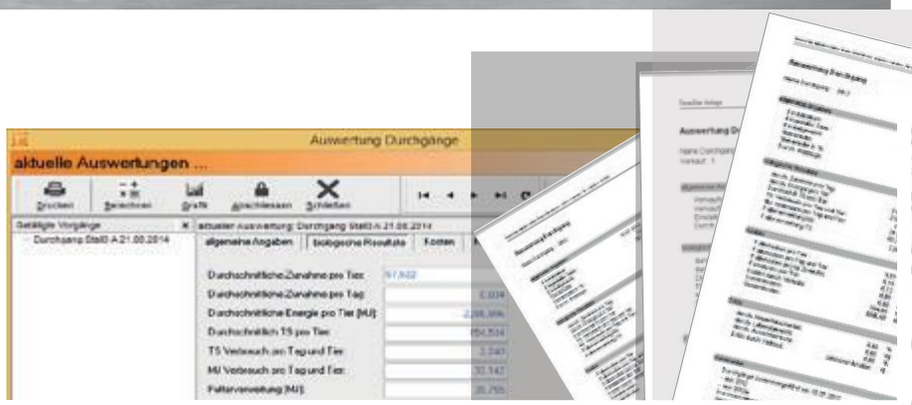
Some examples:

- Showing and hiding columns and rows Frei
- Positionable data fields
- Adjusting the font and font size
- Filters for temporal and local, daily and weight-guided data selection.



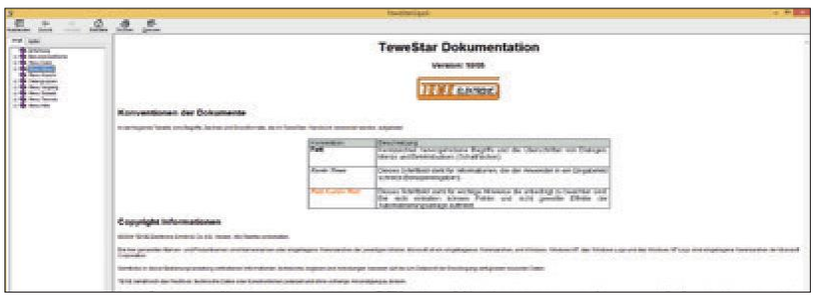
EVALUATION

All feeding data is recorded. After consultation with the tax advisor of the respective farm, a financial division of the farm can be demonstrated using simple analysis programs.



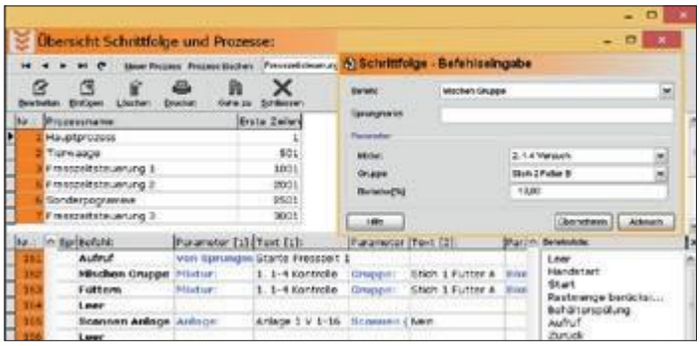
TEWESTAR ONLINE HELP

The TEWESTAR has an integrated support system that can be called up at any time. Extensive manuals, operating aids and, of course, training at TEWE simplify the use of the computer.



STEP PROGRAMMING

The used type of feeding method is defined in the technical data and in the step programming. In the "Step sequence" data group, the individual and customized feeding sequence can be set. 500 programme steps can be registered for a daily routine. The input is supported by a choice of possible commands. By clicking on the desired command a choice box appears. Now you can enter, e.g. the feed group or the mixture that is to be fed. In addition to common mixing and feeding commands, there are many other useful functions available, e.g. to switch valves or pumps or to create your own cleaning and rinsing routines. All this offers a maximum of flexibility for designing the feeding or daily routine. Additions or extensions are thus possible at any time.

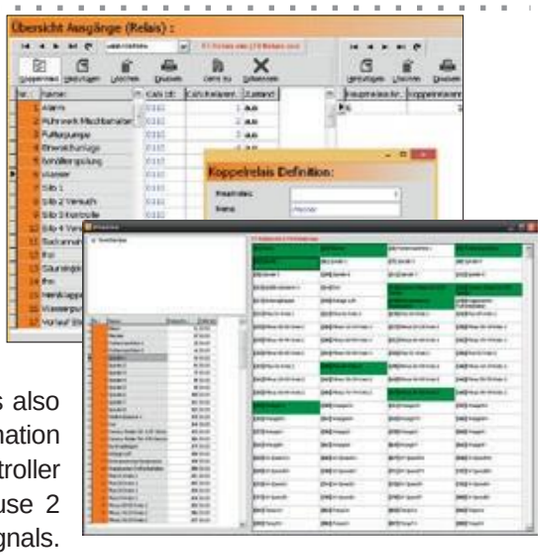


MANUAL RELAYS CONTROL

NEW 2018

New overview of switched relays

All input signals and outputs (relays or switching transistors) are entered in a clear list. You can expand the system at any time by inserting further assemblies (e.g. additional relay cards or sensor valve boxes). These additional devices just have to be added to this list. In the list, you can then assign each input and output its own name, e.g. relay no. 11: "Bag intake" or relay no. 35: "Feed valve new stall compartment 5". This keeps your feed system transparent and makes it easier to keep track.



In addition, you have the option of linking each output with other outputs. It is also possible to programme a switch-on and switch-off delay for each link. In combination with step programming, you thus dispose of a simple programmable logic controller (PLC). During commissioning, testing or checking of the system, you can use 2 function keys to switch each output on and off or query the status of the input signals.

You can use your smartphone or tablet PC to enter the barn and check, for example, whether the valves are switching correctly or whether the actual status of the trough sensors corresponds to the display on the TEWESTAR, thus ensuring that the system is functioning properly.

DOSING AND CONTROL METHODS

Residue feeding

- With intermediate tank
- With intermediate tank and weighed water tank
- with weighed intermediate tank and weighed water tank
- with weighed intermediate tank
- with component slide tank (KPS)
- Tandem, alternate mixing with 2 mixing containers
- with tap line in compartment
- Switchover to tap line in the circuit system (Hydrotransfeed)
- Dosing water via circuit
- Rear watering
- exact quantity measurement via flow meter

Multicontainersystem

- one mixing container, several dosing containers
- several premix containers, one or more mixing or dosing containers
- Dry components are dosed into a separate, weighed container. At the same time liquid or other dry components are dosed directly into a sencond the feed mix container (component pre-weighing).)

Tap line system

- Simple tap line
- with removed head distributor for sub-taps in the compartment
- Tandem alternative mixing with 2 mixing containers

Transfer system

- Recirculation system with multiple circuits
- Simultaneous dosing of several components, simultaneous dosing with several pumps (Speedfeed)

SYNCHRONOUS FEEDING

- simultaneous feeding from 2 mixing containers into one trough (feed mixing in trough))

Pig Start

NEW 2018

- 2 container system / Multi-container system
- Weekly rhythm / 3-week rhythm
- fermentation
- premixing

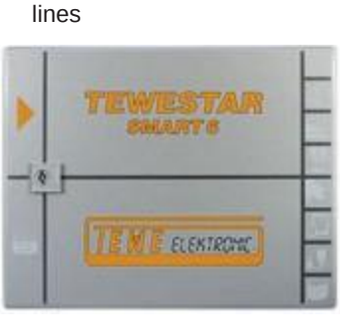
Fig. of a fermentation process

Raw fibre/CCM/ Mixing

- via dry receipt
- via liquid reqeipt

DRY FEEDING

- simple chain system
- Batch system: up to 12 batch mixers with 4 feed lines each can be controlled in parallel
- Easy Mix Volumetric feed blending and alternation of different components NEW 2018
- Easytronic II Control of several feed lines



All procedures listed here are included in the TEWESTAR smart 6 version and can be operated in parallel. This means that no extra software packages need to be purchased for system expansions and conversions..

Airfeed I

- Mixing on single valves
- groupwise mixing
- autom. switch over after "x" days to tap system

GRIND-MIX

- Complex grind/mix controls
- time-controlled grinding/mixing processes
- Control of autonomous mill controls

FISCAL SPLIT OF OPERATIONS

- delivery note production NEW 2018
- Operational component sale NEW 2018

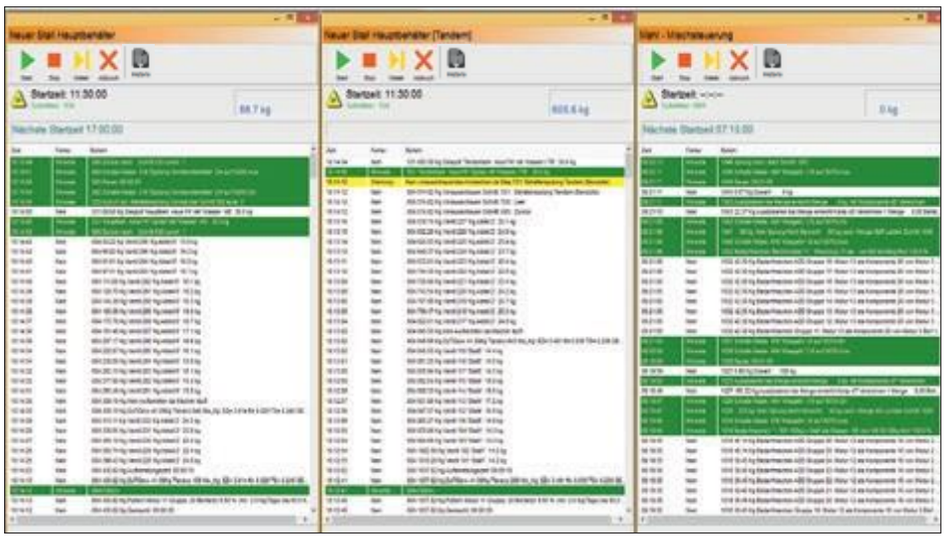
SYNCHRONOUS FEEDING

- 1 container for fermentation mixing - fermenting – storage
- 2 Cont. fermentation alternate mixing - fermenting - outsourcing
- Temperature measurement or temperature setting via TEWESTAR (MVD16)
- PH-value measuement
- Individual stirring methods freely programmabler
- Hygienisation before fermentation

Airfeed II

- Mixing on single vales groupwise mixing
- Dosing dry or at a DM value set for each valve
- Mixing of own mixtures in daily silos
- Provision of chain systems
- Provision of On-demand station
- Straw dosing NEW 2018

PARALLEL PROCESS

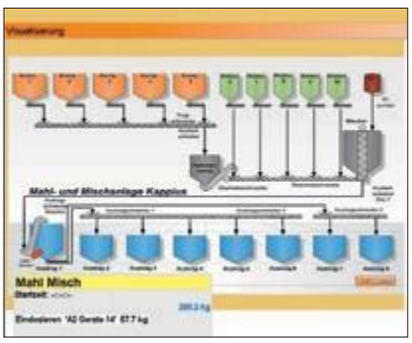


With TEWESTAR you can run up to 16 processes in parallel. Each process has a maximum of 500 program steps. In a 1st process you can control e.g. a piglet liquid feeding system. In a 2nd process e.g. a sow or fattening feeding system.

In a 3rd process, for example, a grinding and mixing plant or an automatic batch dry feeding plant can also be controlled in parallel. Information can of course be exchanged between the processes via certain commands: For example, an automatic withdrawal from a liquid CCM pre-mixing tank must be blocked if a new batch is mixed in this tank.

GRIND-MIX

The control of complete grinding & mixing plants, also in combination with liquid and dry feeders or with other dosing controls, is possible without any problems. Especially



A data group "Grinding and mixing technology" has been designed especially for grinding and mixing technology. Here, mixtures and their composition from individual components can be created as required. The order of the components in the mixture can easily be changed by mouse click. Only the created mixtures and components of the mixtures are displayed (dynamic database management). The control of hammer mills, crushers or collecting screws, even several, can be easily assigned to the dosing processes. For fast grinding or mixing processes, several components can be dosed simultaneously via weighed silos.

MODERNIZATION OF THIRD-PARTY SYSTEMS

Durch Due to the structure based on a modern Windows operating system, in which all relays to be controlled can be freely assigned and programmed, it is possible to modernize any third-party system with a TEWESTAR control computer.

It does not matter whether valves are controlled with 12 volts, 24 volts, 48 volts or 230 volts in direct or alternating voltage. By replacing the control cabinet and weighing system, which is usually necessary, the entire remaining feeding system can continue to be used. With this frequently practiced procedure, it is important that the installation is precisely coordinated, since the conversion is often carried out during operation.

See the operating system under **www.youtube.com/user/TEWEElektronic/videos**

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