OPERATING INSTRUCTION - SOFTWARE

MEGACOMP
MEG VISTA und MEG TABLA

GENPRO - INOUT - BLOW OUT - AD LIBITUM - SIMULTAN
Option: MEGAMIX-PLANTS

MEG VISTA

MEG TABLA

SCHAUER

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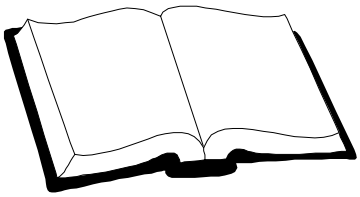
1 PREFACE

We congratulate you on your decision to purchase a high-quality product from Schauer.
In order to use this product successfully,



PLEASE READ THE OPERATING INSTRUCTIONS AND SAFETY DIRECTIONS BEFORE THE START-UP!

These operating instructions include important information for an easy operation.

Please operate and maintain your equipment according to these operating instructions.
The equipment will thank you with a smooth operation and high reliability.

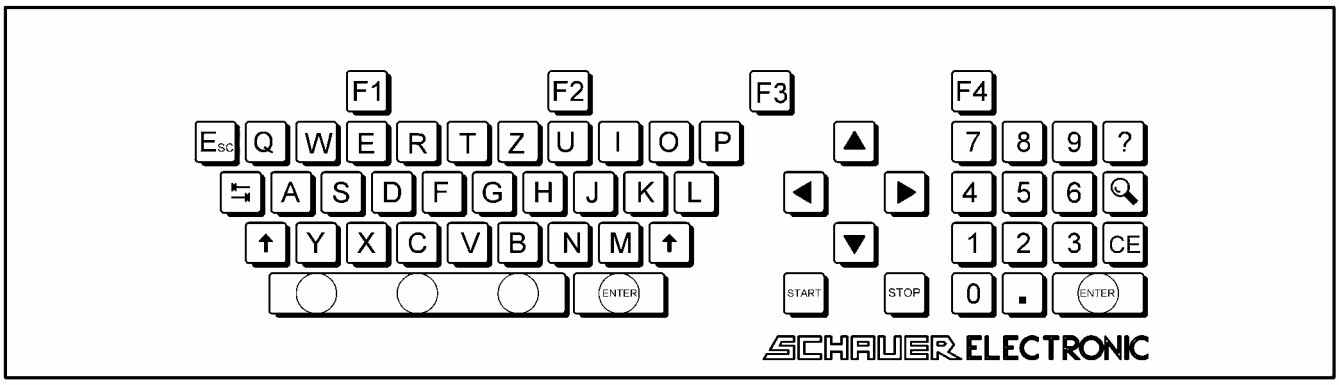
Additional safety instructions are also mentioned in "Operating Instructions MEGACOMP VISTA and MEGACOMP TABLA” and "Operating Instructions Liquid Feeding”.

2 GENERAL

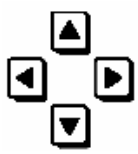
2.1 Keyboard

The MEGACOMP – process computer is operated by a keyboard.

Below please find the setup of the keyboard for MEG VISTA; (a PC-keyboard is used for MEG TABLA):



FUNCTION KEYS (for TABLA PC-keyboard F1-F2-F3-F4)
Some subprograms require additional keys for inputs and acknowledgements.
The computer can assign various functions to the top four keys (= FUNCTION KEYS) on the keyboard.
The lower section of the screen (function key field) will show you, which function each function key currently has.



These keys are used for moving the cursor (up - down - left - right) in the input mask.

Leaf through the pages:

PAGE-UPSIDE: You can swap one page up (for TABLA PC-keyboard: Page↑)

PAGE-DOWN: You can swap one page down (for TABLA PC-keyboard: Page↓)

PAGE-RIGHT: You can swap one page to the right (for TABLA PC-keyboard: SHIFT →)

PAGE-LEFT: You can swap one page to the left (for TABLA PC-keyboard: SHIFT ←)

TAB-key
Due to the tab, you can change to the next right column.
Please press the TAB-key together with the SHIFT-key, in order to change one column to the left.

HELP-key (for TABLA PC-keyboard: F5)
This key is not used at the moment

SEARCH-key (for TABLA PC-keyboard: F6)
This key is used to find numbers of feeding points, numbers of animals, position numbers etc.
Put in the desired number and the program changes to the corresponding line.

START-key (for TABLA PC-keyboard: F12):
If you press the START-key (after having pressed the Stop-key) you can continue the activity.

STOP-key (for TABLA PC-keyboard: F9)
The STOP-key interrupts the feeding- respectively the preparation sequence during the AUTOMATIC-operation or SEPARATE START-operation. If you press this key you interrupt the actual activity of the plant.
In the left upper corner of the screen you will see: **Action: = STOP.**

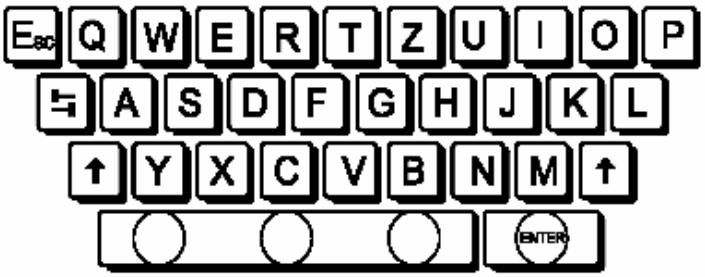
DELETE–key (for TABLA PC-keyboard: space bar)
This key is used for deleting a number. If you press the CE-key you will delete the number, on which the cursor is currently placed.

ENTER-key (for TABLA PC-keyboard: ↵)
This key is used to open and close different program points.
In order to open a program point, please position the cursor on the desired program point and press the ENTER-key.
If you want to leave a program point, please press the ENTER-key again.

The ESC-key is used to cancel an input, before you have confirmed your input and before you have changed to the next input field.

NUMBER FIELD
This number field is used to enter numbers.

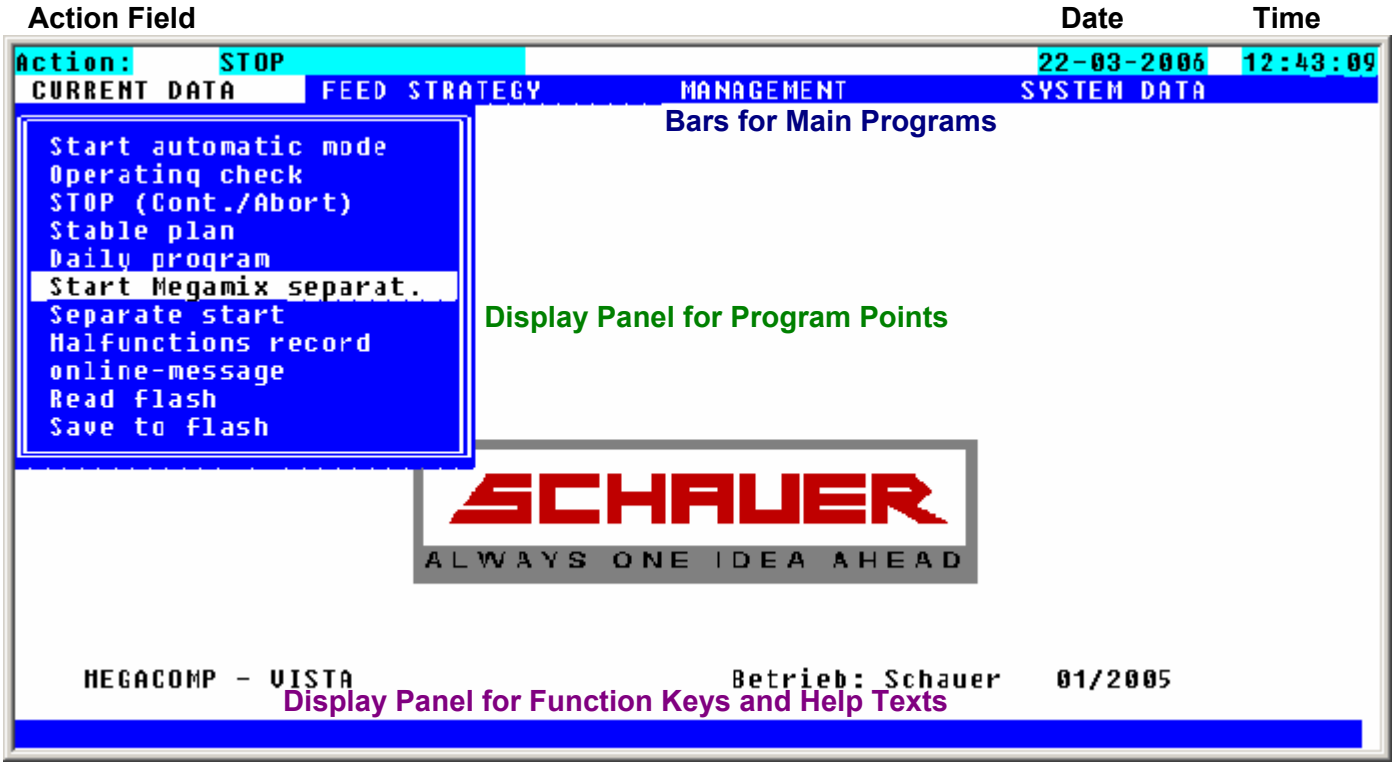
SHIFT-key (for TABLA PC-keyboard:⇧);
If you press the SHIFT-key together with an alphabetic key, the letter is written capital.



The LETTER FIELD is used to write texts.

2.2 MAIN MASK

The main programs, the program points and the current action of the computer are displayed in the main mask. It is possible to retrieve different special functions by using the function keys.



Date / Time: Here you can see the current time and date.
Please set time and date in "System Data" in "System Time".

Action Field: In the left upper corner of the screen **Action:** you will see the activity, which is currently carried out by the process computer (e.g.: Dispense, Prepare, etc.)

Bars for Main Programs: You can choose the main menus (General, Management, Feed Strategy, System Data etc.) by using the cursor keys LEFT and RIGHT.
The required list of the program points will be displayed after pressing the keys UP and DOWN.

Display Panel for Program Points: You can choose the program points by using the cursor keys UP and DOWN. If the cursor is situated on the desired program point (inverse display of the menu point), please press the ENTER-key to open this program point. Press the ENTER-key again to leave this program point.
You can directly choose a program point by using the numerical keys. For example: If you press key “2“ in column GENERAL, then program point “Operating Check“ will be opened.

Display Panel for Function Keys and Help Texts: This menu bar will help the operator. Additionally the current functions of the four function keys are displayed, as these function keys may be different in all program points and columns.

2.3 General Instructions and Error Messages in the Program

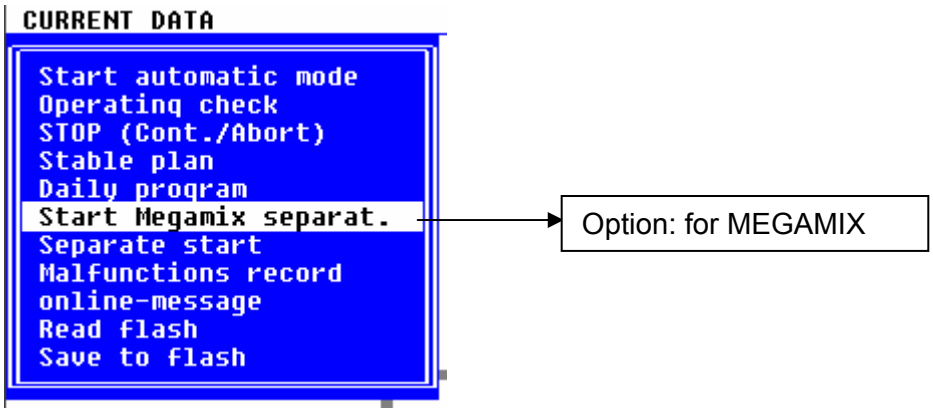
The feeding is already active!	The feeding has already been started;
Attention: Automatic Operation is active!	The AUTOMATIC OPERATION is active - you cannot call up the required program without stopping the Automatic Operation;
START is already active!	The system has already been activated;
STOP is not active!	In order to enter this program point you have to stop the system;
Automatic start has been activated!	The automatic function of the system has been activated;
Maximum valve quantity is not in ascending order!	The upper limits of the valves have not been entered in ascending order in “Pen Groups”;
Dry Substance > 25 percent!	The entered recipe shows a dry substance, which is higher than 25 %. There might be problems to pump the feed properly through the lines.
File ONLINE.EXE is not executable!	The online program cannot be called up;
There must be at least 1 entry, which is not labelled “FREE!”	There must be at least one entry in the “Daily Program” without the label “FREE”;
Time interval is longer than 24 h!	The times in the Daily Program must be set within a time period of 24 hours;
The days are not sorted in ascending order!	The days in the Feed Curve are not entered in ascending order;
No data have been found!	No data have been saved;
From < to	The inputs for copying the instabling data are not correct;
Stable is already occupied!	The target valve is already occupied during the instabling of the animals;
Error from/to/after	The inputs for copying are not correct during the instabling of the animals;
Incorrect value (order/size/number of pens)	The entered order of the pen groups is not correct;
Password is not correct!	The entered password is not correct;
Enter password!	The password must be entered to get access to this program;
Memory is full!	The memory capacity for the animal scales is full;
Pen number is not identical!	The pen numbers must correspond, when summing up different animal weightings;

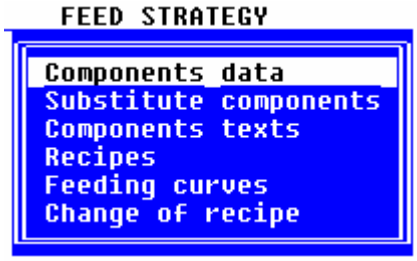
Incorrect percentages!	0 % = not possible;
Printer is not ready!	The printer is not connected or has not been identified;
Empty processing identification!	The processing identifier has not been set correctly for a day point;
Please wait!	The computer has to process data before further inputs can be accepted;
Too little free memory!	Memory capacity is full;
Animal weight is not included in the feed curve!	The animal weight of the specified pen is not included in the feed curve;
Distribution is complete!	All animals have been split into pen groups;
Already occupied valve number!	The entered valve is already occupied;
Distribution is not complete!	Not all animals have been split into pen groups;
Too many animals must be split!	The entered number of animals cannot be divided into pen groups (input is too high);
No pen group is free!	All pen groups are full;
Target is full!	The entered target pen group is full;
Valve and pen group are not identical!	The pen group and the selected valves are not the same;
Different feed curve values for the same groups	The mixture of feed, which is poor in protein and feed, which is rich in protein must be the same for the same groups, only the quantity may be different;
Identical groups need the same feed curve recipe numbers!	The recipe numbers of the feed curves of one group must be the same;
The same recipe numbers!	For Genpro, two different recipe numbers must be used for the feed curve;
Wrong recipe number in feed curve for pen...	The recipe number in the feed curve is incorrect for the specified pen;
Wrong combination of energy, protein for pen	According to the feed curve, the feed cannot be prepared for the specified pen;

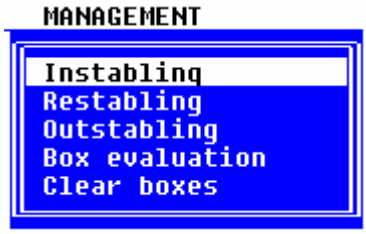
5. PROGRAM FOR MEGACOMP

6. Summery

The program for the MEGACOMP is divided into several main programs, which in turn consist of different program points. Below, please find the program structure, showing a summery of the different program points.

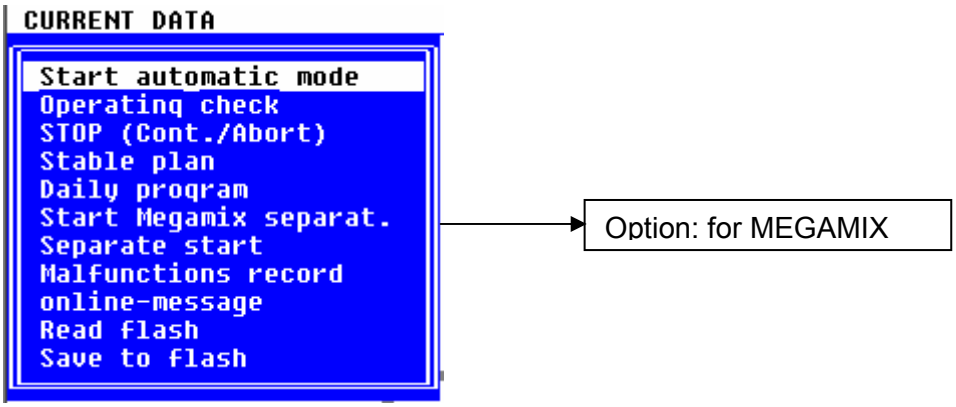






2.4 GENERAL

This is the main program for the input and display of data, which are daily required. The main program “General” is divided into several subprograms:



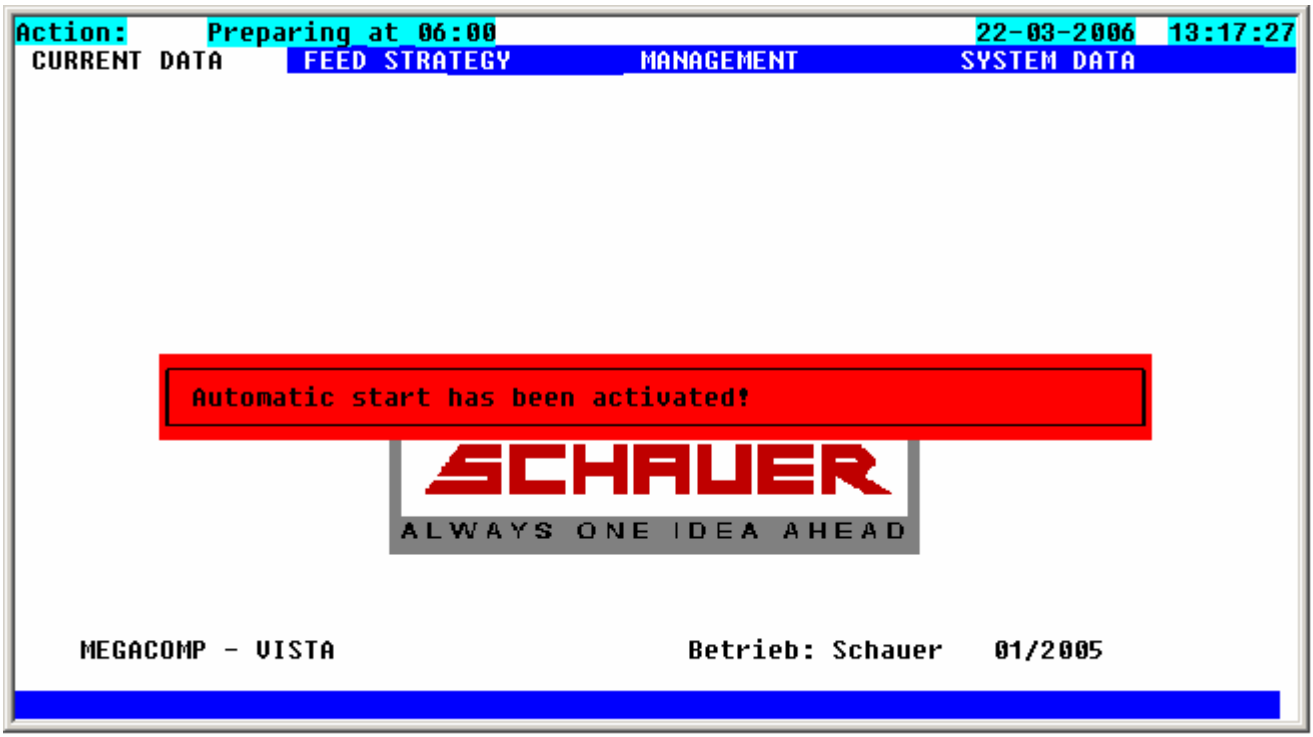
2.4.1 Start Automatic

If you enter this program point, the AUTOMATIC of the plant is started and the entered Daily Program is processed:

Requirements:

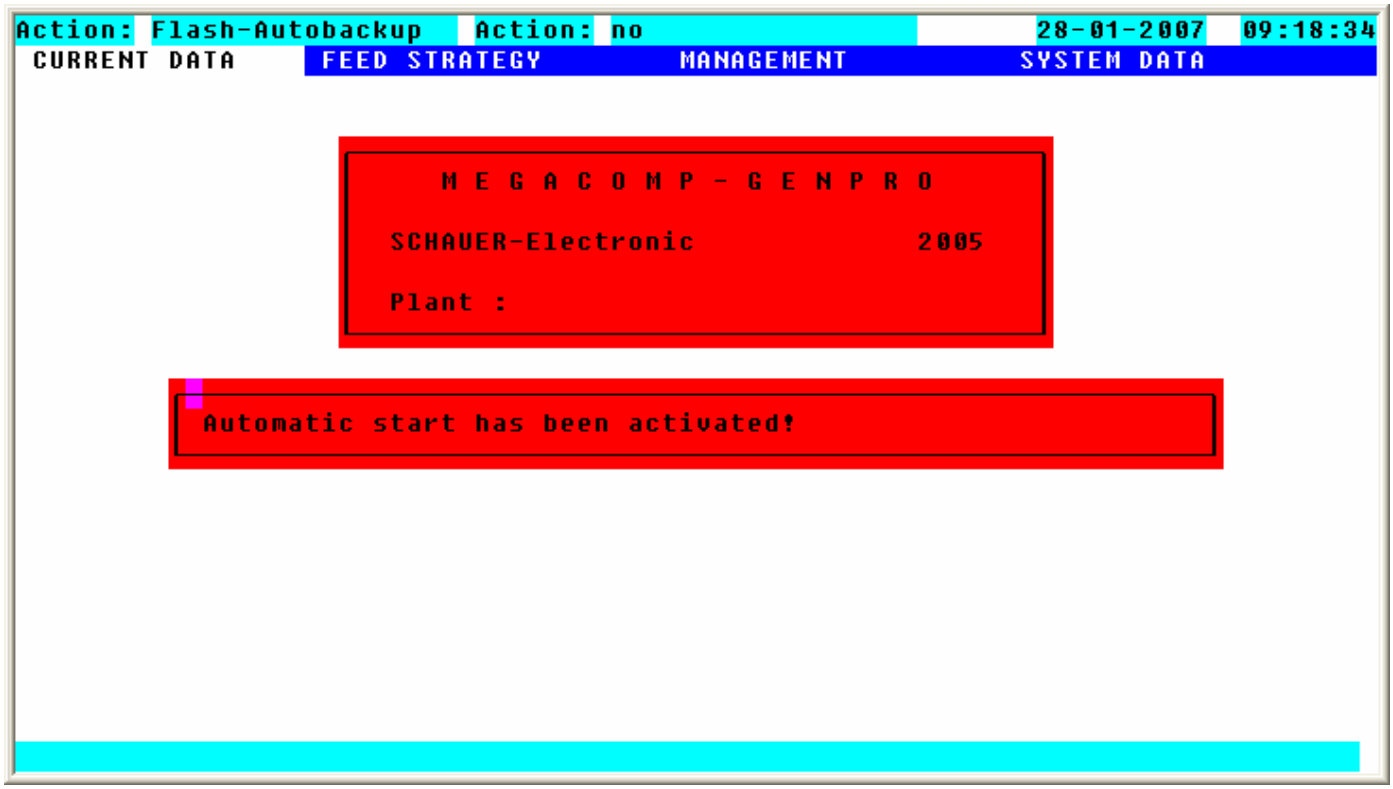
* Automatic Operation must not be active. (Action: no)
* No "SEPARATE START" is allowed to be active. (Action: no)
* All data must completely be entered, so that a correct sequence of the feeding can be guaranteed.

Input:



Start from daily po.: You can also pretend, with which daypoint feeding shall start. Remark, that only from one daypoint with practice "Prepare" a start can happen. Until current time daypoints are processed.
Insert under "Daypoint" "0", practice is started at current time.

If the automatic operation was started sucsessfully, the following display will be shown.



By pressing any key, the current activity or the next coming point of the Daily Program (e.g.**Preparing at 06:00**) is shown in**Action:**, which is placed in the left upper corner of the screen.

By pressing STOP, you interrupt the Automatic Operation. If you press the STOP-key, this is shown in the left upper corner of the screen: **Action: STOP**

You can re-enter the Automatic Operation with the START-key or you can continue or terminate with program point “STOP (Cont. /Abort)”. Please read program point “STOP (Cont. /Abort)”.

2.4.1.1.1 Option: Coupling with MEGAMIX

As soon as the Automatic Operation is started and no preparation or feeding is active on the MEGAMIX, the MEGAMIX controls constantly, whether MEGACOMP sends an order for the preparation of feed. If MEGACOMP sends an order, the component quantities will be taken over and prepared. Then the feed quantities will be pumped into the mixing tank of the concerning MEGACOMP.

2.4.2 Operation Check

This program point enables to control the plant and the actions, which are currently active.

```
Action: Calculation        Action: no                    28-01-2007   09:19:02
 CURRENT DATA    FEED STRATEGY        MANAGEMENT          SYSTEM DATA

Operation check
                                                  check malfunction record !!!
     --------- Tank  1 ---------                 --------- Tank  2 ---------
 Input     : N        Comp. :  0                Input     : N        Comp. :  0
 no                                             no
                      Set value:                                      Set value:
 Action    :             0.0  kg                Action    :             0.0  kg
  Calculation                                    no
                      Quantity :                                      Quantity :
 Malfunct.:             0.0  kg                Malfunct.:             0.0  kg
  None                                           None
                      Line   :  0                                     Line   :  0
 Group     : Charge: Valve :  0                Group     : Charge: Valve :  0
     1       0 - 0                                  1       0 - 0
                      Quant.- Valve                                   Quant.- Valve
 Daily progr. :         0.0  kg                Daily progr. :         0.0  kg
     1                            0                  0                            0

STOP - CONTINUE   |        YES        |                    |     Extra
```

Tank 1 Display of feeding sequence of vat 1.

Tank 2 Display of feeding sequence of vat 2.

Input **Input:** This input field is used to start a feeding, if you have entered a waiting time in the Daily Program. The computer shows in field Action "Waiting for Input“ and in field Input the message: “Start Preparation (Y)”. Now please press function key 2**YES**, and the computer starts to work. (Read “Daily Program” in “Waiting Time”).

Action : **Action:** Here you can see the action, which is active at the moment (e.g.: Prepare, Dispense, Mix, etc.)

Malfunct.: **Malfunction:** Every malfunction, which may occur during the feeding sequence, is noticed here. Detailed information will be shown in “Malfunction Record”. If there is a new entry in the “Malfunction Record”, the following message will be shown:
check malfunction record !!!

Group : Here is the group shown, which is prepared for or feeded at the moment.

Charge: If needed quantity of one group is more than vat content, quantity will be based in appanage charges. Now are shown the total amount of charges and active charge number.

`Daily progr. :` **Daily Program:** You can find out in the “Daily Program”, which activity is carried out at the moment, due to the number, which is displayed here.

`Comp. :` Number and name of component which is prepared at the moment.

`Set value:` Amount (in kg) of shown component, which must be prepared.

`Quantity :` Amount (in kg) in mixing vat.

`Line :` Number of active ring line, at which is feeded.

`Valve :` Number of active valve, which is feeded.

`Quant.- Valve` Amount (in kg) which must be dispensed at shown valve.

`STOP - CONTINUE` Via pressing function key 1 you can stop or start each part of plant (for vat 1 or vat 2) separate:

```
Stop-continue
                    Input   :
                 (YES= STOP)
 Tank       1 :          N
 Tank       2 :          N

 !    YES - NO          !
```

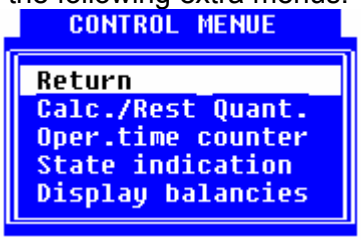
Insert at vat "Y", with help of function key 2 `!  YES - NO  !`, this part of plant is stopped at leaving the menu. Insert "N" the concerned part of plant is restarted.

2.4.2.1.1 Option: for MEGAMIX

The MEGACOMP controls component 2 (even the mixer, if it is released for this component) during the waiting time until the MEGAMIX prepares the required feed quantity. This signal can be used for control purposes. The required total feed quantity, which is prepared at the moment by the MEGAMIX, is shown as the command quantity of component 2.

It is possible, that the MEGACOMP prepares some components itself → read "Component Data". In this case you have to wait until the required feed quantity is prepared by the MEGAMIX and until it is pumped into the mixing tank of the MEGACOMP. Then the components, which are prepared by the MEGACOMP itself, are ordered.

Extra Press function key 3 to open the following extra menus:

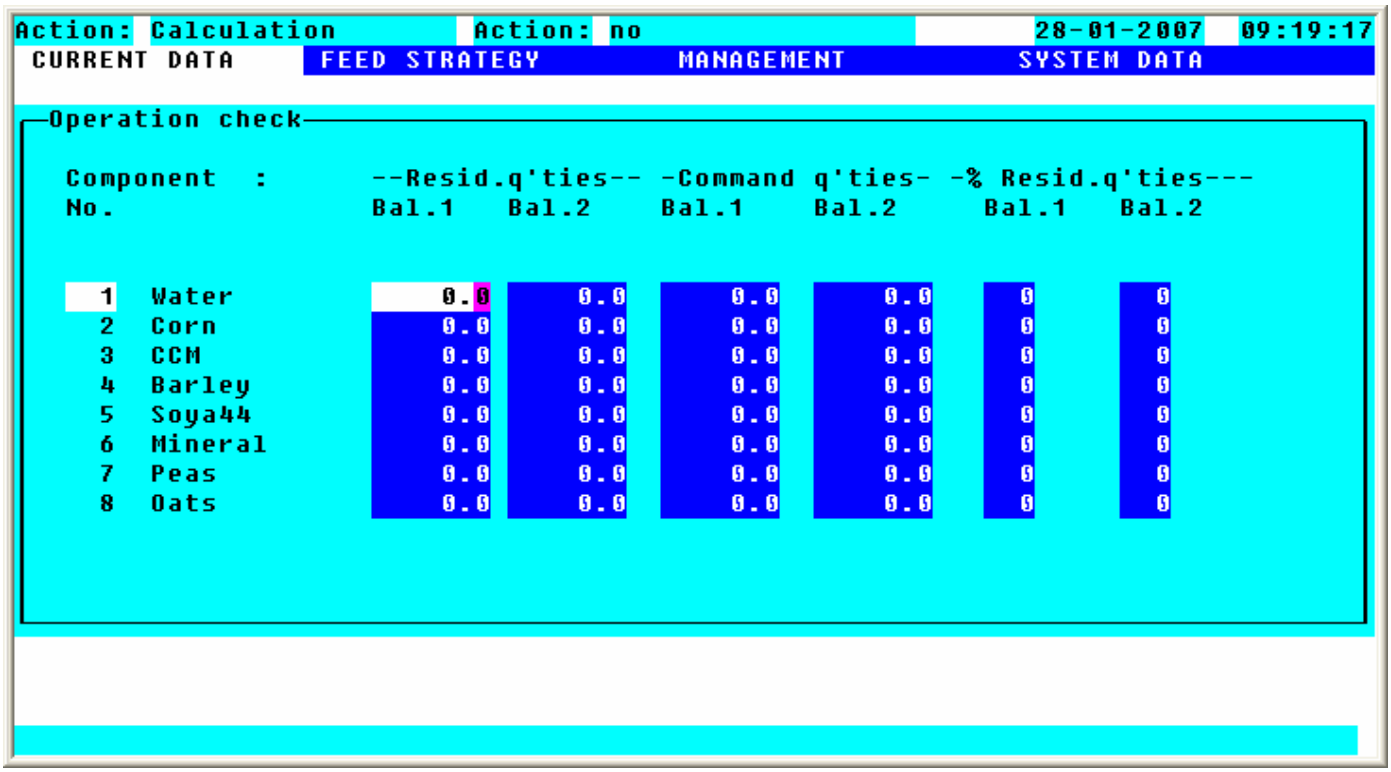


Return: Back to "Operating Check"

Finish: Back to operation control;

Command/Residual Quantities

Here you can see the residual quantity after the feeding and the calculated command quantity for preparation.



Component : No. Here you can see the number and name of the components.

Resid.q'ties Here you can see the residual quantity (in kg) of components after the feeding. Only the quantity, which is additionally prepared to the recipe (e.g. cleaning quantity) is displayed. These residual quantities can manually be changed, e.g. when you take away or add component quantities without automatic feeding sequence.

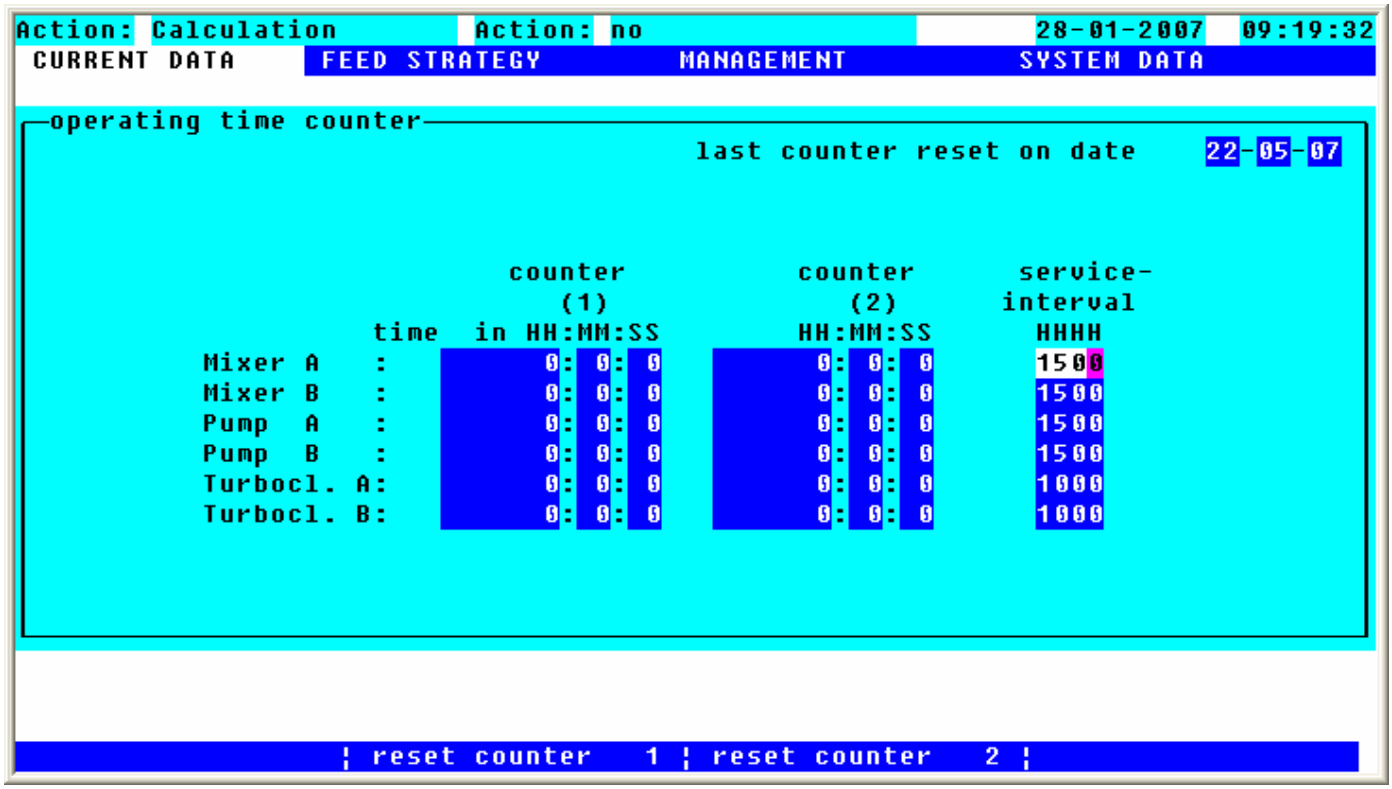
Command q'ties Here you can see the command quantities (in kg) of components, which are needed for the actual feeding.

-% Resid.q'ties--- Mixture proportion of current recipe to be prepared or distributed.

Operating Time Counter

Here you can see the operating time of mixer and pump and - if available - of the Turbo Clean. By pressing function key 3 reset counter 2 and by entering the code **4711**, you can reset counter 2.
Counter 1 cannot be reset.
If the operating hours reach the service interval, a message will automatically be shown in the “Malfunction Record”. Reset counter 2 and the message will not be shown any longer.

HINT	The maintenance work, which must be carried out after reaching the service interval, are shown in the “Operating Instructions for Mechanics”.



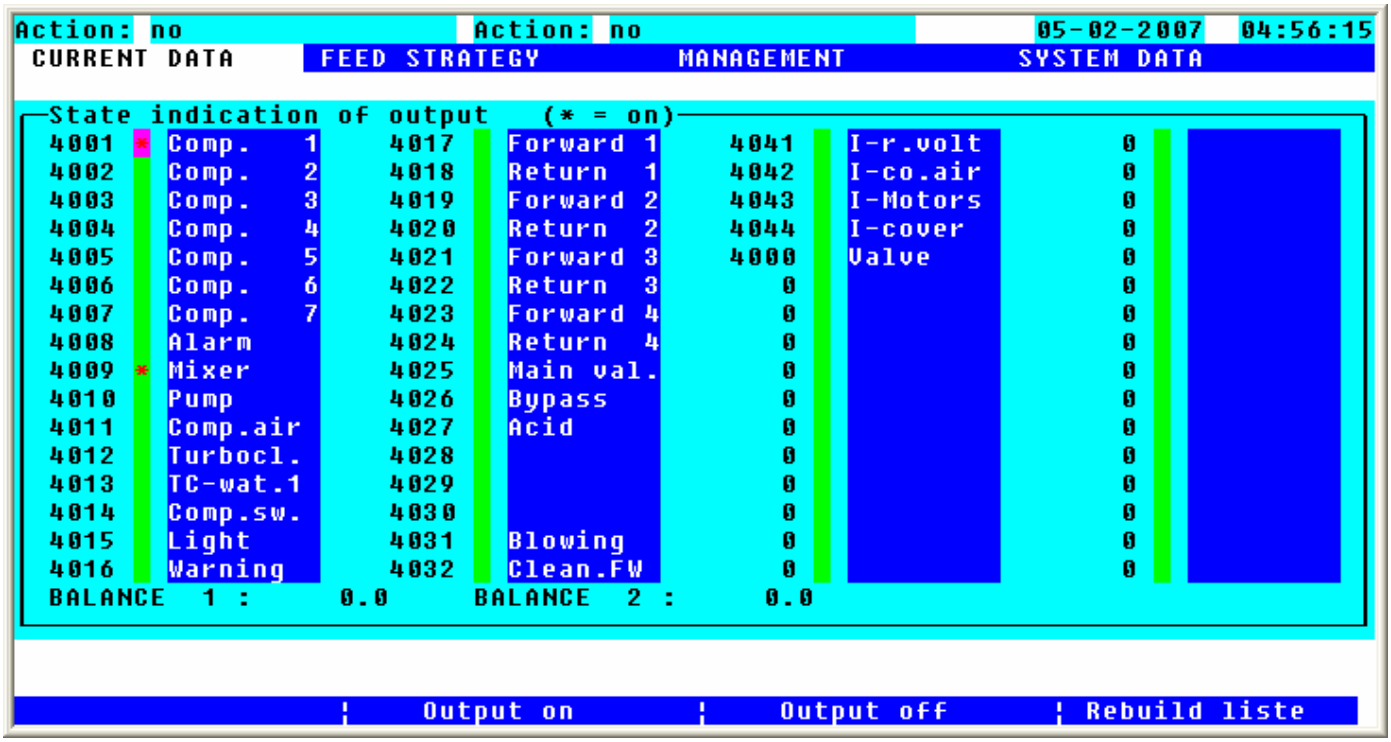
Output

In this program point you can see, which outputs are activated at the moment. You can manually switch on and off additional outputs.

DANGER Please carry out changes as per the Operating Instructions and only after consultation with qualified personnel.
As you can switch on and off any outputs in this program point, please avoid wrong input, which cause failures or even damage to property.

Input:

If you want to open this program point, please enter the MINUTES, which are actually shown, as a CODE.



4001
4002

Output Number: All outputs, which are entered in the “Output Allocation”, are displayed. If an output is used several times, it is shown in this list only once. And the gadget description, which was entered first for this output in the “Output Allocation”, is displayed.
In order to update this list, please press function key 4 Rebuild liste. The list can only be updated, if no other action is active (= Action "No” or Action "Stop").

Output active? An asterisk is displayed for all outputs, which are switched on. If you want to manually switch on an output, choose the desired output by using the cursor keys. Then press function key 2 **Output on** and the output is switched on and an asterisk will be shown. If you want to switch off an output, please press function key 3 **Output off**.
If outputs are manually switched on, they will be switched off after a STOP of the Automatic Operation, of the Separate Start or of the Separate Feeding as well. If you want to continue after having pressed the STOP-key, the above mentioned outputs will not automatically be switched on again.
During the update of the list (=F4 **Rebuild liste**) the outputs are switched off.

Gadget Description: The gadget description, which is entered for this output, is automatically taken over by the “Output Allocation”. If no gadget description is entered, the gadget number will be displayed.

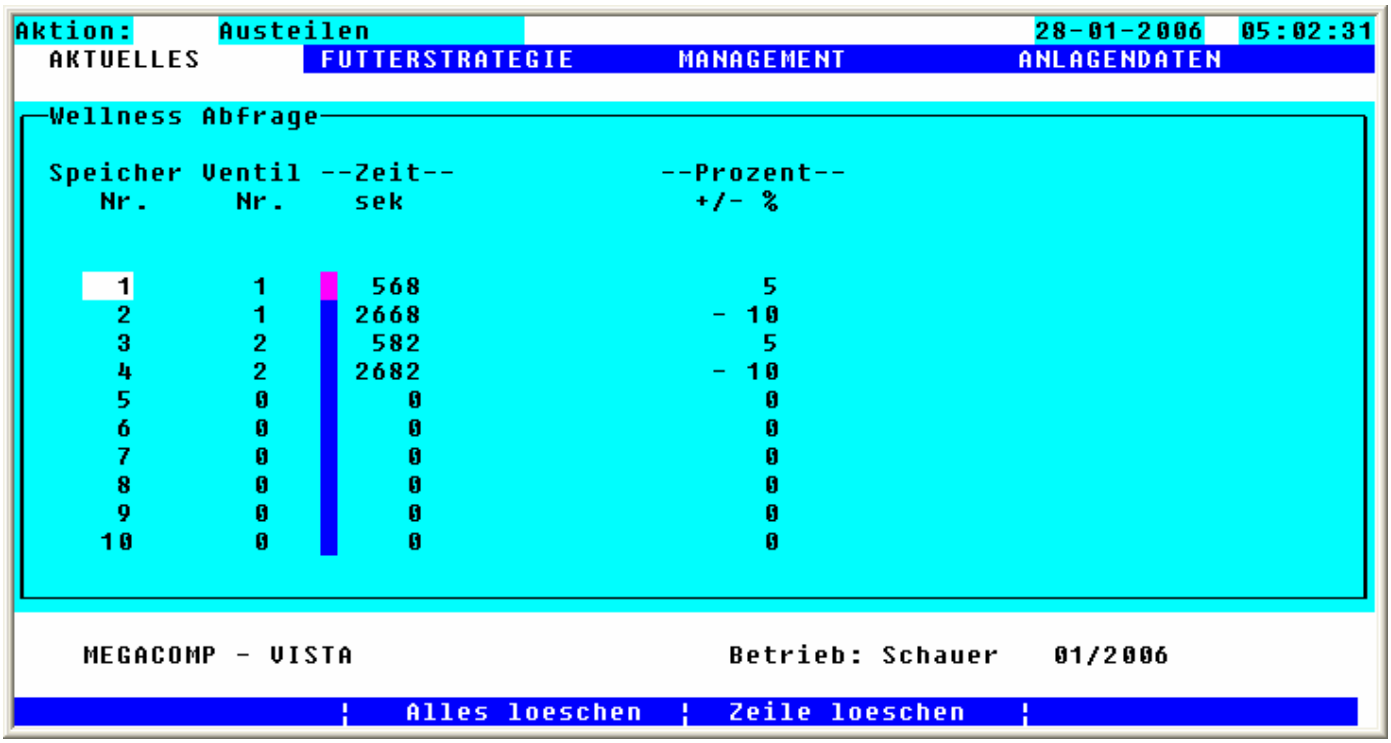
Scales Display

Choose this menu to have a big display, showing the scales values.

Malfunc.rec. Press function key 4 to change to program point "Malfunction Record”.

Wellness Request

Display of “Sensor request plan”. It is shown, for which feeding place in which time a sensor request must be done and the correction factor.



Speicher Nr. Continuous safing number.

Ventil Nr. Number of feeding place, which must be request. Valves are enroled after feeding sequence. Already done requests are deleted of this mask.

Zeit sek Remaining time (in sec.) until sensor request.

Prozent +/- % Correction factor is shown, from which feeding amount is possibly changed, according to request result.

With function key 2 **Alles loeschen** you have the possibility, to delete all entries of this mask. With function key 3 **Zeile loeschen** the entry from line at which the cursor is at the moment, will be deleted.

2.4.3 STOP (Cont./Abort)

This program enables (after pressing the STOP-key) to reactivate the interrupted operational sequence of the system or to totally break off.

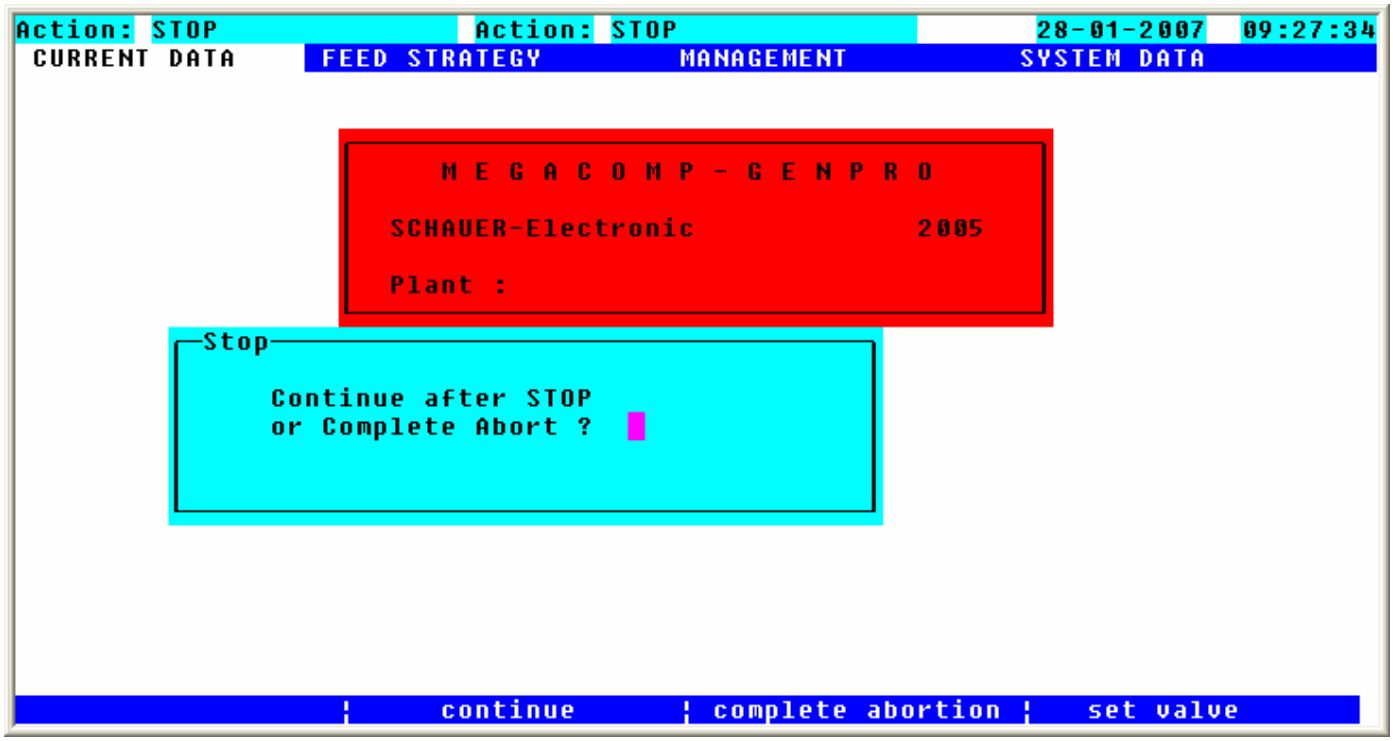
Requirements: * The Automatic Operation or Separate Start must be active.

The action must be stopped, before you can enter this program, i.e. you must press the Stop-key. “STOP“ must be displayed in “Action”, otherwise the following error message is displayed on the screen:

```
STOP is not active !!!!
```

If no action is actually active, this message is shown as well. **Aktion: keine**

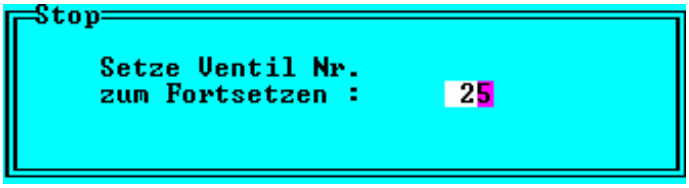
Input: Press the STOP-key in order to stop the plant. With this program point you can restart the interrupted operational sequence of the plant again or totally break off:



Continue With function key 2 you can continue the action.

Complete abort With function key 3 you can interrupt the action.

Set valve Press function key 4 to determine, whether the feeding should be continued with a certain valve (if the plant was stopped during dispensation).



2.4.4 Stable plan

This program offers an overall view of all feeding valves. You can enter and change the most important data here. The data, which were entered in program point “Management”, are taken over.

Requirements:

* If you want to use the “Management” to have an evaluation of your plant, open program point "Instabling" at first and put in the data.
* Enter data in "Feed Strategy” to calculate a feed quantity.

Action: no Action: no 28-01-2007 05:03:00

CURRENT DATA | FEED STRATEGY | MANAGEMENT | SYSTEM DATA

Pen list

pen	head	weight kg	fatt-days	Q'ty Rec.1 kg	max. daily %	daily corr. %	fin.type val.calc. %	group	feed. curve	Feed days
1	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
2	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
3	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
4	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
5	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
6	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
7	20	68.0	0	0.0	200	90	2 100 Cal1	1	1	0
8	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
9	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0
10	20	68.0	0	0.0	200	100	0 100 Cal1	1	1	0

total | loss | goto pen no.

Input:

from box no.

By pressing function key 4 you can determine, which pen numbers you want to change. After pressing the ENTER-key, the program changes automatically to the desired line. If you press function key 2 group --> or function key 3 ring -->, you can choose the first animal of a recipe or of a ring.

to pen

group : 1
line No. : 1

find pen-No. : 1

change from - till In each column, which shows this function key, you can enter the same value from a certain box (**from Box**) to a certain box (**to Box**).
If you confirm your input in **Execute** with function key 3 **change** with **YES**, all data are taken over, if you press the ENTER-key when leaving the mask.

```
modify from-till

max. box      :  60

from box      :   1
till box      :  12

weight        :   0.0


execute       : NO
```

Box **Box:** Number of the feeding point

Head **Piece:** Number of animals (can also be changed by instabling and outstabling). In the case of a loss you can correct the number of animals here. This loss is even considered during the next evaluation.

loss Press function key 3, so the hitherto mortality in pieces, like in added weight of mortality animals is shown.
Further you can insert new mortality in this mask.
Concern your inputs under **Assumption** with function key 3 **change** with **YES**, alt leaving this mask, via pressing ENTER-key, all data are adopted

```
pen:     1     pen group:     0

Losses (head) to date :     0
Losses (weight)to date:   0.0

Losses (head) now     :     0
Indiv. weight now     :  68.0
execute ?             : NO
```

total Press function key 2 to display the number of animals, the total weight and the average weight of the boxes.

```
        from pen :      1
          to pen :     60

   Sum o.livestock:     200
   Sum of weight  : 11830.7
   Av. weight:    :    59.2
```

Animal weight stat. By pressing function key 3 in menu "Total" you will get an overall view of the weight distribution of the animals. You can choose the **weight** of the individual groups yourself, and then the program calculates the **number** and **percentage** of the animals in this group.

Animal weight statistics

Weight from	until	No. animals	Percent
0	25	0	0.0
25	35	40	20.0
35	45	0	0.0
45	55	20	10.0
55	65	60	30.0
65	75	60	30.0
75	85	20	10.0
85	95	0	0.0
95	105	0	0.0
105	0	0	0.0

Weight

Weight: The average weight (in kg) per animal is shown here. Put in the instabling weight here or in program point "Instabling".
This weight is newly calculated every day as per feeding curve and eventually under consideration of the percentages of the fed quantity. (Read “Special Operating Parameter” 64)

Fatt. days

Fattening Days: The fattening days are calculated from instabling date to the current date. (Only for the use of "Management").

Q'ty Rec.1 kg

Quantity Recipe 1: Daily feeding quantity (in kg) per feeding place;
This programme is based on assumption, that weight of all animals in a group is similar, and is feeded with the samre recipe, which is composed from one less proteine-recipe and one full of proteine-recipe.
At entry into stable plan all feeding quantities are new calculated.
Is in column identification "Calc." inserted, the quantity from animal amount, of each feed curve, of corresponding recipe data and percent value (column quota) is calculated.
The feeding quantity can be inserted manual, when column "Identification" is justified on "Inp" (= manual input).

max. daily

Maximum Daily Quantity: Due to the Ad-Libitum-Feeding you can limit the percentages of the calculated daily quantity, which is allowed to be dispensed to the animals per day. If this quantity is reached by the feeding points, no feed is dispensed any longer.

%

Quota (%): percentage matching to feed curve; inputs from 0% to 150% possible, e.g. input "90" means, that 90% are feeded from feed curve calculated quantity. So different genetic features of animals can be equalized.

<u>For Wellness System:</u>
Because of a sensor test in column "Quota" the percent value is corrected automatically. You can adjust this adaption in programme point "Valve Control" in "Wellness-Group".

Daily corr.

Daily Correction (%): This is the daily adaptation to 100 %. If e.g. 90 % are indicated in column “Proportion”, you can determine here, how many percentages are daily added to the 90 %, in order to reach 100 %. Thus, you can temporarily feed according to a reduced feed curve.

End

End value of quota: Until this value the percentage feed curve quantity is alike, when in column ”daily correction" is a value inserted.
An adaption happens until in column "Quota" the value reached the inserted rated value.

Identif.

Identification:
You can determine for each feeding point, if the feed quantity is manually entered or if the quantity is calculated as per the feed curve.

For inputs please press function key 3 change:
"Inp." Manual input of the feed quantity
"Cal1" Calculation of the quantity as per feed curve
"Cal2" Calculation of the quantity + automatic allocation of the recipe
(read “Change of Recipe”)

group

Group: Instead of recipe the group will be inserted. So animals can belong to the same group, but have different feed curves, and can be feeded at same time.

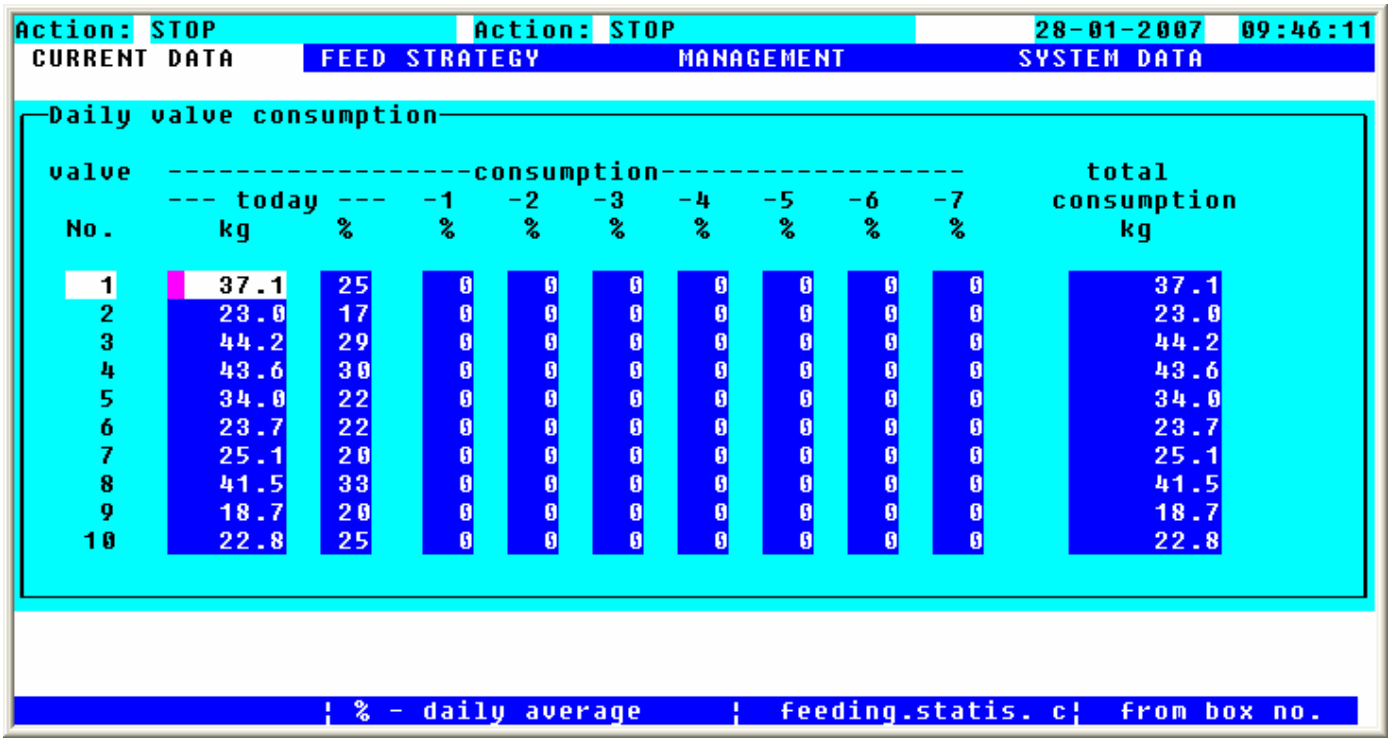
Feeding curve

Feed Curve: This is the number of the feed curve, as per which this feeding point must be fed.

Feed days

Feed days: For each animal for each feeding day is one fodder day added.

daily consumpt.va. You will get an overall view of the daily consumption, if you press function key 3 in column “Weight”.



valve No.	today kg	today %	-1 %	-2 %	-3 %	-4 %	-5 %	-6 %	-7 %	total consumption kg
1	37.1	25	0	0	0	0	0	0	0	37.1
2	23.0	17	0	0	0	0	0	0	0	23.0
3	44.2	29	0	0	0	0	0	0	0	44.2
4	43.6	30	0	0	0	0	0	0	0	43.6
5	34.0	22	0	0	0	0	0	0	0	34.0
6	23.7	22	0	0	0	0	0	0	0	23.7
7	25.1	20	0	0	0	0	0	0	0	25.1
8	41.5	33	0	0	0	0	0	0	0	41.5
9	18.7	20	0	0	0	0	0	0	0	18.7
10	22.8	25	0	0	0	0	0	0	0	22.8

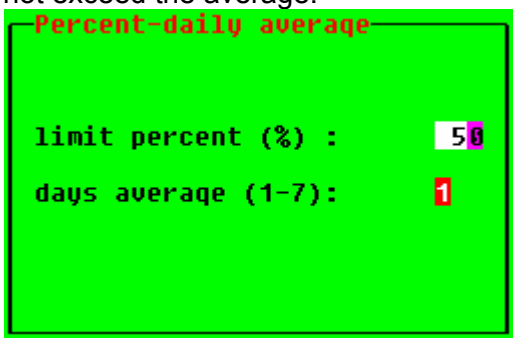
valve **Valve:** Number of the feeding point valve

today **Consumption today:** Here you can see the fed quantity of today, per valve in kg and in percent of the calculated daily quantity.

-1 -2 -3 -4 -5 -6 -7 **Consumption of the last 7 days:** Here you can see the quantity, which was fed during the last 7 days in percent of the calculated daily quantity.

total consumption **Total Consumption:** Here you can see the fed quantity, since the instabling of the valve (in kg).

% - daily average By pressing function key 2, you have the possibility to display valves, depending on the percentage of daily consumption. Please put in the limit value in percentages and the days, how long this limit value must not exceed the average.



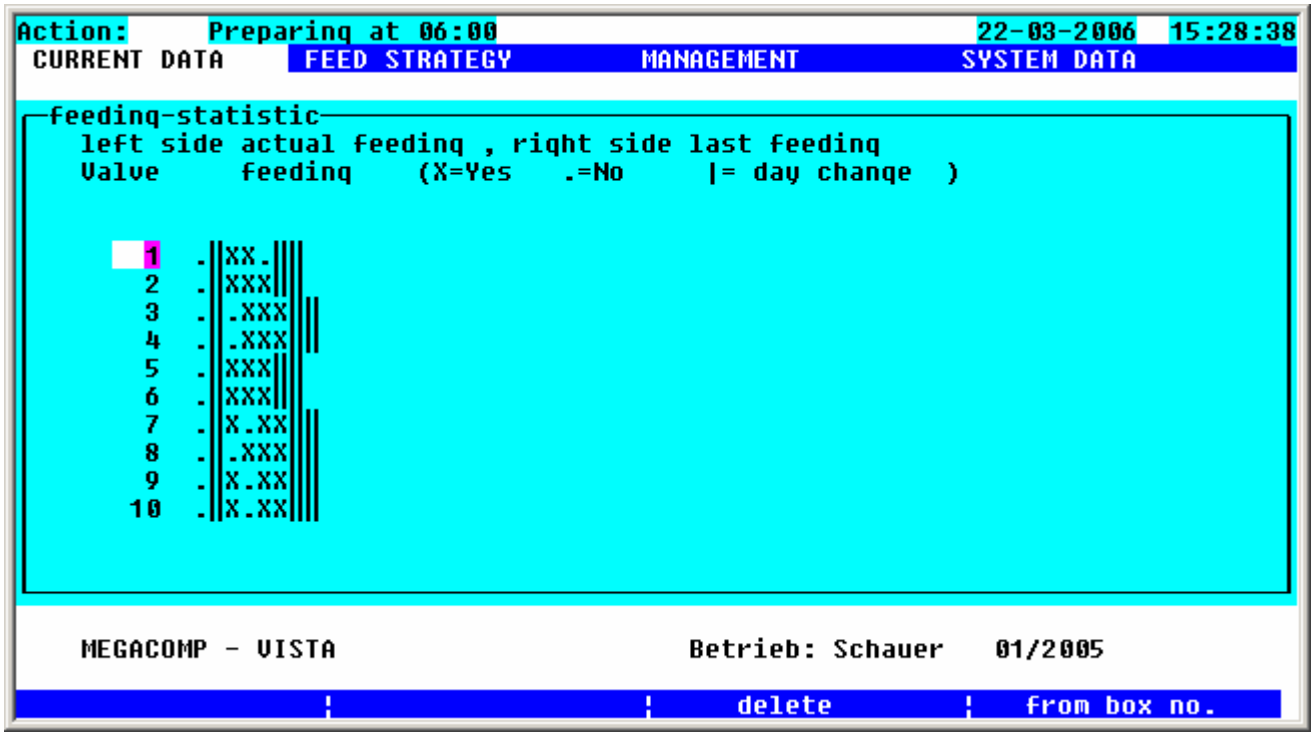
feeding.statis. c Press function key 3 and you will get an overview of the feeding. You will see, which feeding points should be fed during the feeding process and it will show you which feeding points were actually fed.

X Means, that this feeding point was fed during the indicated feeding process. (The trough was empty);

. Means, that this feeding point was not fed during the indicated feeding process. (The trough was still full).

| Day changeover

The feeding processes are shown in the order of their age (from the left to the right). On the left side you can see the last feeding process and the more you move to the right side, the older the feedings will be.



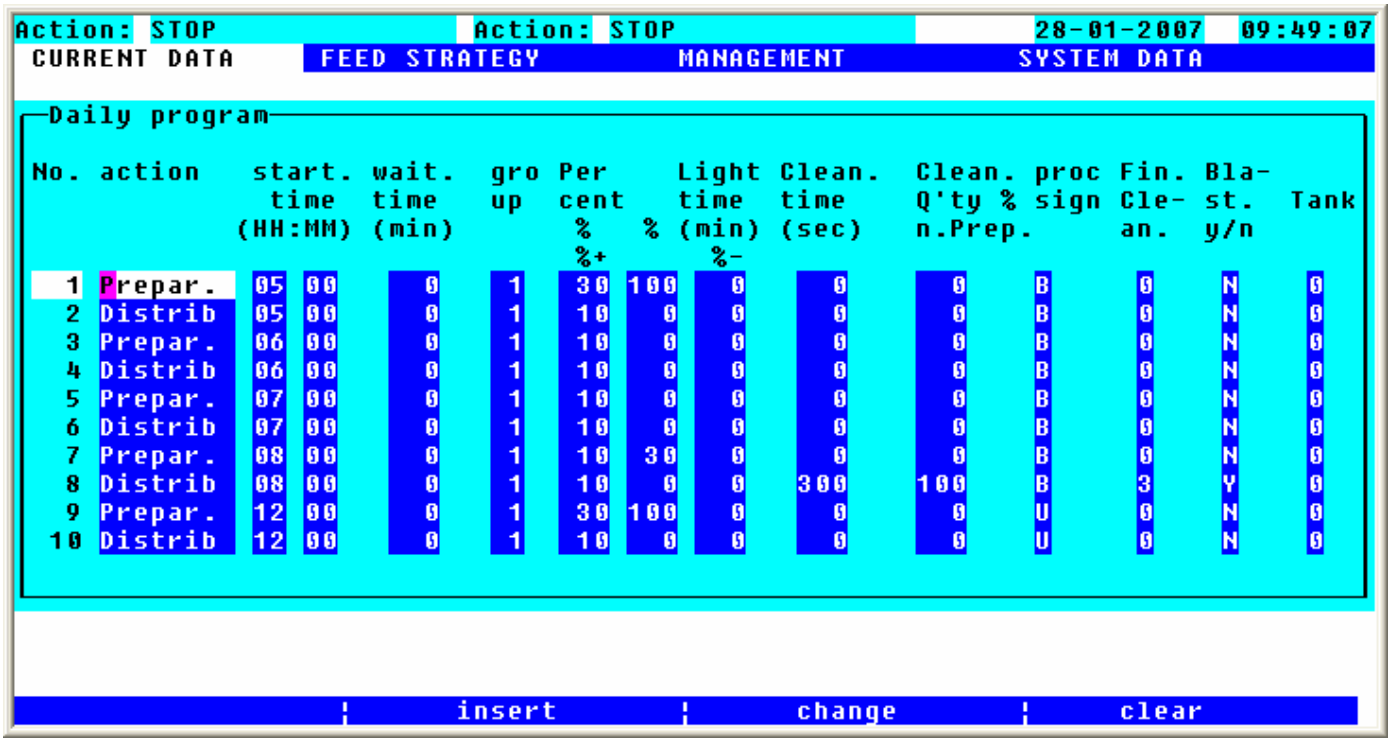
delete Use function key 3 to delete all inputs in the “Feeding Statistic”.

2.4.5 Daily Program

Here you can put in activities, which have to be carried out when the automatic process starts:

Requirements: * It is only possible to enter this program, when no action is active.
This is shown in the left upper corner of the screen:
"Action: NO" or "Action: STOP"

Input:



insert By pressing function key 2, one or more new lines are inserted between two activities.

clear By pressing function key 4, you clear the line at the cursor position.

action **Action:**

– "Prepar."	Preparation
– "Dispense"	Dispensation
– "SensorT“	Test of trough sensors, e.g. for Wellness-feeding: (=increase/decrease feed quantity automatically; → read “Feeding Sequence - **Option: Wellness-Feeding”**
– "Free"	No action

Press function key 3 **change** when the cursor is on the right position. Thus you can enter the desired activity.

Start time

Start Time: Here you can fix the start time of any action.
Please consider the correct chronological order of the actions.

If two activities have the same start time (e.g. preparing and distributing), the second activity will be started when the first is finished.
The program is allowed to extend into the next day, but must be finished within 24 hours.

Waiting time

Waiting Time: Input in minutes

Input = 0; if the computer reaches the start time, the activity starts automatically (preparation, dispensation).

Input > 0; after having reached the start time, the computer waits the entered time until it begins with the automatic start of the activity, if you have not started it manually. The waiting time can be activated for the preparation at a certain component (read "General Operating Parameter" 25).
E.g.: You can determine, that component 1 to 3 are automatically prepared and that the computer waits until the preparation of the remaining components is started by pressing function key 2 in "Operating Check".

Sensor Test for Wellness: Waiting time after dispensation, until the sensor test should be carried out. → Read "Wellness-Feeding".

gro up

Group: Here you put in, which group (and which valves) shall be edited at appendant practice.

Per-cent

Percentage:
1. Column: Here you can determine how many percent of the daily quantity should be prepared and dispensed during the corresponding action.

%+ **Plus Percent:** Shows the increase of the daily feed quantity in percent for Wellness → read "Wellness-Feeding".

2. Column: Limit of the daily quantity for Ad-Libitum-Feeding.
Preparation "0" = trough sensors are read; feed is prepared and dispensed only for feeding points, which show message "Empty".
Preparation "100" = trough sensors are read; feed is prepared for all feeding points, but only feeding points, which show message "Empty", are fed.
Input in percentages (Preparation) >0, <100 = the trough sensors are read, but only those of feeding points, which have not reached the entered percentage of the daily consumption. Afterwards the feeding points, which show message "Empty", are fed.
Preparation "101" = trough sensors are not read; feed is prepared and dispensed for all feeding points.

Light. time

Light Time: Here you can determine the time (in minutes), how long the light is switched on after the feeding.

%- **Minus Percent:** Here you can see the decrease of the daily feed quantity in percent for Wellness → read "Wellness-Feeding".

Clean. time

Cleaning Time: Here you can determine the time (in sec.), how long the signal for the vat cleaning should be shown at the end of the feeding.

Clean.
Q'ty %
n.Prep.

Cleaning Quantity % next Preparation: In this column you can set the cleaning quantity for the vat. The quantity in percent, which is needed for the next preparation by the cleaning component, is indicated. In the case of a Separate Start, the quantity is taken of "General Operating Parameter" 14, if nothing is put in here. The cleaning component can additionally be determined in "General Operating Parameter" 15.

proc
sign

Process: Here you can see the current situation of the Daily Program. You can also influence the activities:

- \- no activity
- U activity was not yet processed
- B activity finished
- V activity should urgently be processed (bring operation forward)
- 1-9 leave out this day point

Bring Operations forward: Put in a "V" and the concerning operation will start immediately (not depending on the time of day) after having processed the previous operations "F". In order to bring operations forward, you have to interrupt the automatic-mode by pressing the STOP key. Afterwards please put in a "V" for the desired operation. Then you can activate the automatic-mode again by pressing the START key.

Leave out a Day Point: Please determine how many days this day point should be left out.

Fin.
Cle-
an.

Final Cleaning: Clean the pipes at the end of every feeding.
-->read "Times Turbo Clean - End of Feeding".

0 = No end cleaning and no cleaning of valves is carried out.
Even the cleaning of valves is blocked in "Standard" Blow out;

1 = End cleaning is carried out, but no cleaning of valves.
Even the cleaning of valves is blocked in "Standard" Blow out.

2 = End cleaning and cleaning of the valves, which were fed during this feeding, are carried out.
But the cleaning of valves is blocked in "Standard" Blow out;

3 = End cleaning and cleaning of all occupied valves of all active rings are carried out.
(= All valves with number of animals and weight, which were fed during this feeding, are cleaned. But also those valves of the rings, which were not fed during this feeding, are cleaned.)
But the cleaning of valves is blocked in "Standard" Blow out.

4 = End cleaning and cleaning of all occupied valves of all rings are carried out.
(= All valves of all rings with number of animals and weight are cleaned.)
But the cleaning of valves is blocked in "Standard" Blow out.

5 = No end cleaning is carried out, but a cleaning of valves in "Standard" Blow out is possible.

6 = End cleaning without cleaning of valves is carried out. But the cleaning of valves is in "Standard" Blow out possible.

Bla-
st.
y/n

Blow out Yes/No: Decide, whether the pipe should be blown out after the feeding. --> read “Times Turbo Clean – Standard”.

Tank

Tank: You can fix if a certain vat shall be used. Input:
0 means that both vats can be used for preparing and distribution;
1 means that only vat 1 is used for preparing and distribution;
2 means that only vat 2 is used for preparing and distribution;

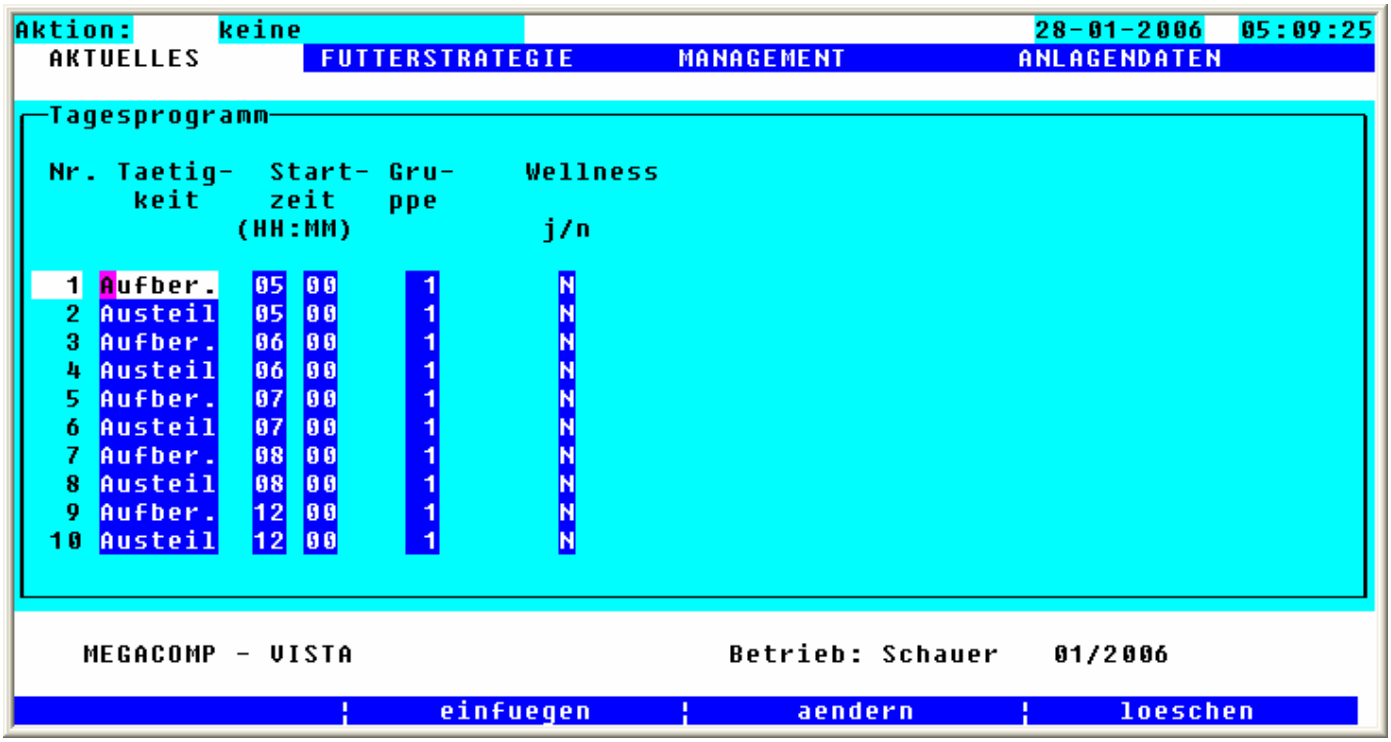
2.4.5.1.1 Option:Bring Forward the Preparation / for Coupling with MEGAMIX

If you have set “Bring Forward the Preparation“, the Megamix already demands the quantity for the next preparation, during the dispensation.
For this purpose you have to release "Bring Forward the Preparation" in "Parameter 5 of MEGACOMP for MEGAMIX-Plant”.

Please consider the following point in the daily program:
The start time of a preparation, which you wish to bring forward, must be the same as the start time of the dispensation, which you want to bring forward.

Please do not carry out a vat cleaning during the dispensation (in the case of “Bring Forward the Preparation”), as the cleaning quantity can not completely be considered. Therefore it can be possible that the recipe for “Bring Forward the Preparation” is falsified.

<-------> Press function key 3, to change between two pages of day programme



Nr. Taetig- keit Start- zeit (HH:MM) Gru- ppe

The number of day programme points, the practice, the start time and the sensor group is adopted from the first page of day programme, but can also be changed in this mask. In this case the change is also adopted on the fist page.

Wellness j/n

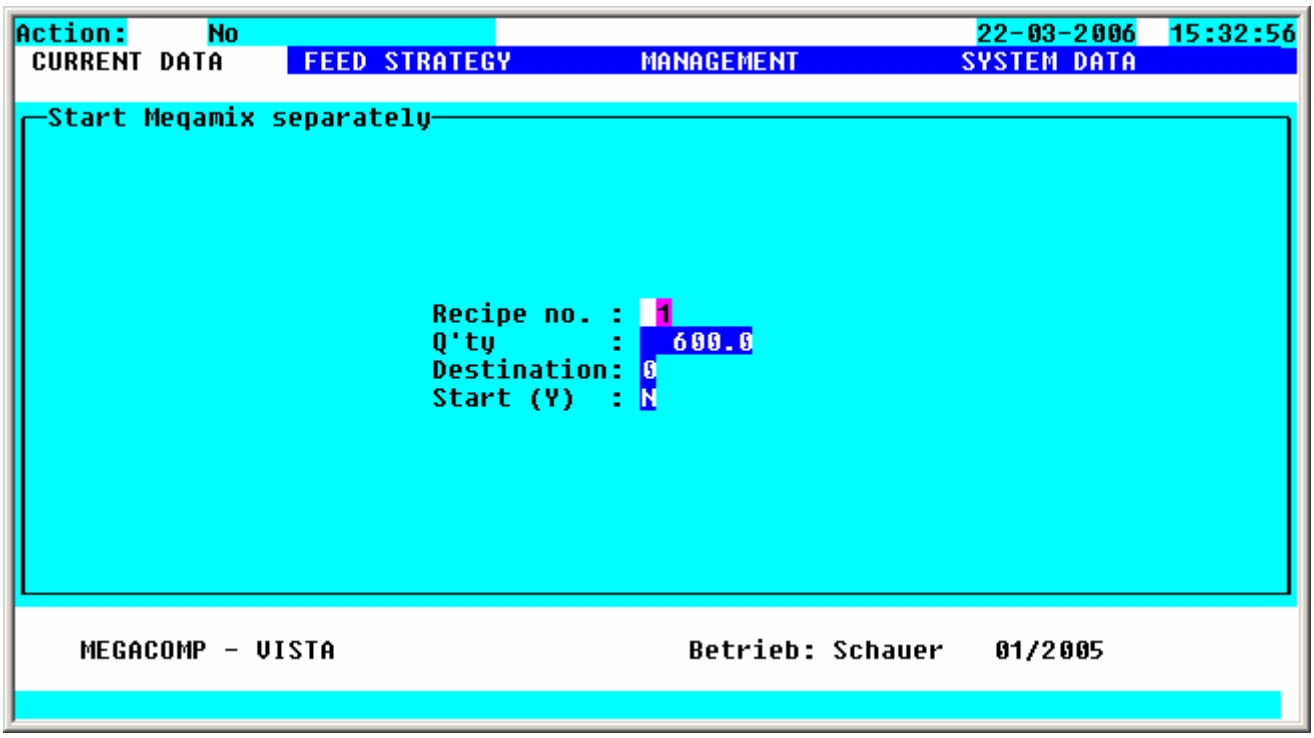
In this column you can fix the practice "Distribute" with help of function key 3 **aendern**, if at this day point a wellness feeding shall be done → also see feeding sequence at **optional: Wellness-Feeding**.

2.4.6 Separate Start Megamix (Option for MEGAMIX)

With this program you can automatically start a preparation for a MEGACOMP, without its demanding quantities. After the preparation, the quantity is pumped into the mixing tank of the concerning MEGACOMP.

HINT	The quantity in the target- mixing tank is not controlled!

Requirements: * You can only open this program, if no action is active! In the left upper corner of the screen you will see: "NO" next to "Action".



Input

Recipe no. :	**Recipe Number:** Here you can determine which recipe should be prepared.
Q'ty :	**Feed Quantity:** Decide how many kilos should be prepared.
Destination:	**From Valve:** Determine, in which target the quantity should be pumped.
Start (Y) :	**Start (Yes):** Function key 2 YES starts the activity.

2.4.7 Separate Start

With this program point you can start the automatic preparation and distribution of the feeding, not depending on the daily program.

Requirements: * You can only open this program, if no action is active. You can see this in the left upper corner of screen: “Action”: "No”.

Input:

Recipe no. : **Recipe Number:** Here you can determine which recipe should be prepared.

Perc. prep.: **Percent Preparation:** Here you can determine how many percents of the daily quantity should be prepared.

Perc. disp.: **Percent Dispensation:** Here you can determine how many percents of the daily quantity should be dispensed. The maximum percents, as quoted in “Percent Preparation”, are allowed to be entered here.

from valve : **From Valve:** Determine, from which valve the feeding should start.

Blasting : **Blow out Yes/No:** Please decide, whether the pipe should be blown out after the feeding.

Final clean

Final Cleaning: Clean the pipes at the end of every feeding.
-->read “Times Turbo Clean - End of Feeding”.

0 = No end cleaning and no cleaning of valves are carried out.
Even the cleaning of valves is blocked in "Standard” Blow out.

1 = End cleaning is carried out, but no cleaning of valves.
Even the cleaning of valves is blocked in "Standard" Blow out.

2 = End cleaning and cleaning of the valves, which were fed during this feeding, are carried out.
But the cleaning of valves is blocked in "Standard" Blow out;

3 = End cleaning and cleaning of all occupied valves of all active rings are carried out.
(= All valves with number of animals and weight, which were fed during this feeding, are cleaned. But also those valves of the rings, which were not fed during this feeding, are cleaned.)
But the cleaning of valves is blocked in "Standard" Blow out.

4 = End cleaning and cleaning of all occupied valves of all rings are carried out.
(= All valves of all rings with number of animals and weight are cleaned.)
But the cleaning of valves is blocked in "Standard" Blow out.

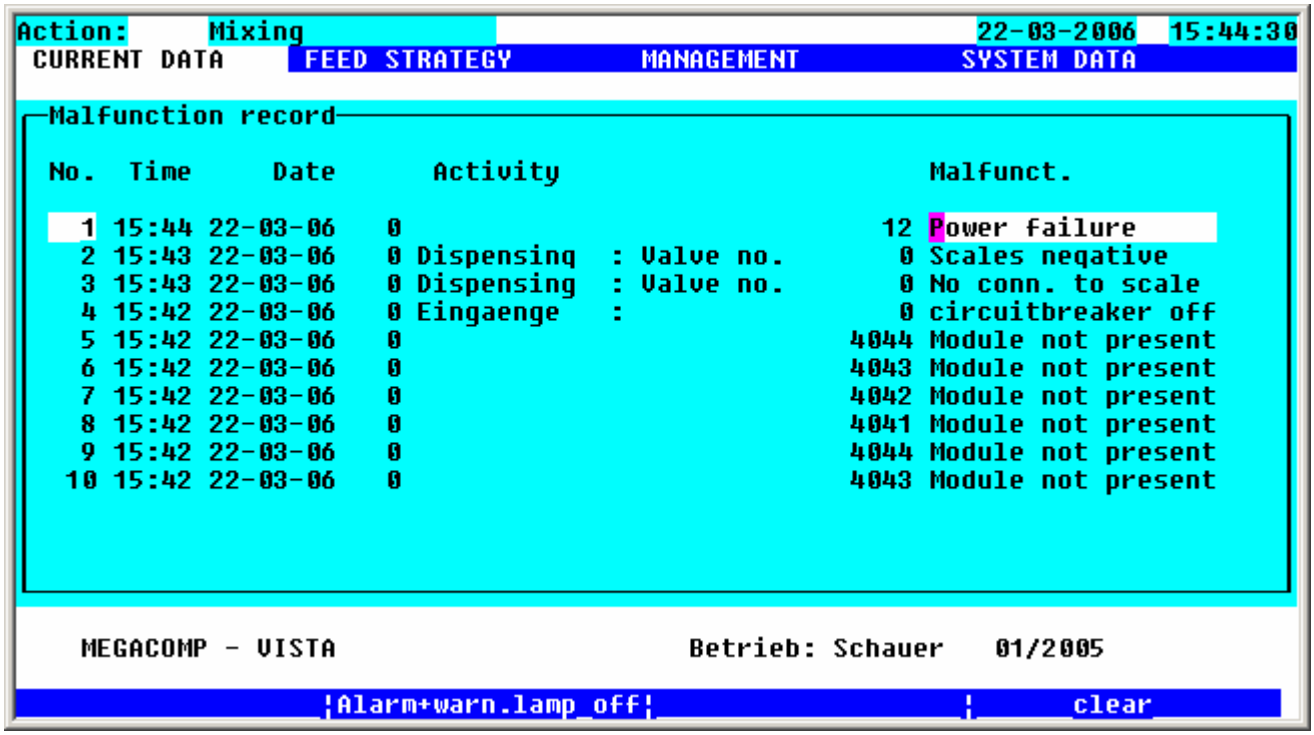
5 = No end cleaning is carried out, but a cleaning of valves in "Standard" Blow out is possible.

Start (Y) :

Start (Yes): Press function key 2 YES to start the entered feeding.

2.4.8 Malfunction Record

This program point shows you the malfunctions, which occurred:



Power Failure

There was no power supply voltage on the feeding computer at the shown time

Possible Reason - Remedy:

- Please check the power supply, if this failure occurs several times.

Substitute Component

This is no failure – only a warning.

One substitute component was required. This message is only noticed once per day.

Possible Reason - Remedy:

- Please check, if the first component can be dosed.
- Eventually, the component silo is empty or the feeder is damaged.

Reserve < Warning Quantity

This is no failure – only a warning.

The reserve of a component is smaller than the entered warning quantity. This message is only noticed once per day.

Possible Reason - Remedy:

- Please check the reserve of the corresponding component.
- Please determine in "Component Consumption", if you want to show a message after a certain reserve of a component falls below a certain warning quantity.

Leak

The value of the scales changes more than the entered value in “Special Operating Parameter” 9. (Warning quantity of the vat)

Possible Reason - Remedy:

- Malfunction “Leak” is shown, if the contents of the vat changes within 10 sec. by more than the quantity (in kg), entered in “Special Operating Parameter” 9.
- Check the input in “Special Operating Parameter” 9.
- Please check the functionality of the scales and of the load cells.
  Check the cable of the load cell (it might mechanically be damaged by chafe marks or mouse bites; or there is a poor connection at clamping points or solder connections of the load cells).
- Please check, whether the load cells or their cables are wet.
- Please check, whether the scales plug is correctly plugged in.
- Please check, whether earthings are connected according to the connecting diagrams.

Blocked

The minimum throughput has not been reached during the preparation of a component, during the filling or emptying of the pipes.

Possible Reason - Remedy:

<u>If this failure occurs during the preparation:</u>

- Please check, whether the silo for the corresponding component is empty or if the feeder does not work properly (circuit breakdown of the motor protecting switch).
- Check the inputs for the throughput check in "Component Control".
- If the component can be activated by the hand manual on the CONTROL – but not automatically, then please check, whether the components are correctly entered in the Output Allocation.
- Define substitute components: if one component cannot be fed, another one is used automatically → read "Substitute Components".

<u>If this failure occurs during the filling or emptying of the pipes:</u>

- Please check, whether the pipe contents are correctly entered in "Ring Parameter".
- Check the inputs for the warning quantity for the filling and emptying in "Special Parameter".
- Check, if the ring main valves can be opened by the hand manual on the CONTROL:
  If yes: check the Output Allocation, if it is not automatically actuated;
  If no: check the power supply of the 24V – valve voltage and ring mains – valve wiring (maybe there are mechanical damages, caused by mouse bites).
- Check the ring main valve directly with the hand manual – check if it opens mechanically.
  If yes: check the pump (if it works properly or if there are foreign substances in the feed pipe).
  If no: check the compressed air (clean the valve and membrane; and check if there are foreign substances in the valve).

- Check the scales - if they react to changes in weight:
  - Please check the functionality of the scales and of the load cells.
    Check the cable of the load cell (it might mechanically be damaged by chafe marks or mouse bites; or there is a poor connection at clamping points or solder connections of the load cells).
  - Please check, whether the load cells or their cables are wet.
  - Please check, whether the scales plug is correctly plugged in.
  - Please check, whether earthings are connected according to the connecting diagrams.

Valve Blocked

Warning! The minimum throughput has not been reached during the dispensation on a feeding point.
Possible Reason - Remedy:

- If this failure occurs during the dispensation of the feeding points:
  - Check, if the mixing tank is empty, although the scales show that feed is available. (Tare the scales again. Before you tare, please choose “Complete Abort“. After the tare-process you can feed the feeding points, which have not been feed so far, by entering the “Separate Start”.)
  - Check, if the corresponding feeding point can electrically be opened by the hand manual on the CONTROL:
    If yes: check the “Output Allocation” and the inputs in “Valve Control”, if it is not automatically actuated.
    If no: check the power supply for the actuation of the feeding point and the wiring (maybe there are mechanical damages, caused by mouse bites).
  - Check the valve directly with the hand manual – check if it opens mechanically.
    If yes: check the pump and the ring main valves (if it works properly or if there are foreign substances in the feed pipe or in the valve).
    If no: check the compressed air (clean the valve and membrane; and check if there are foreign substances in the valve).

- Check the scales - if they react to changes in weight:
  - Please check the functionality of the scales and of the load cells.
    Check the cable of the load cell (it might mechanically be damaged by chafe marks or mouse bites; or there is a poor connection at clamping points or solder connections of the load cells).
  - Please check, whether the load cells or their cables are wet.
  - Please check, whether the scales plug is correctly plugged in.
  - Please check, whether earthings are connected according to the connecting diagrams.

>3 Valves Blocked

More than 3 feeding point valves are blocked
Possible Reason - Remedy:

- Read malfunction "Valve Blocked"

Pump in not OK

The feed quantity cannot be pumped on a MEGAMIX
Possible Reason - Remedy:

- Read malfunction "Blocked"

Vat is not empty

The mixing tank for the dry mixture is not empty.
Possible Reason - Remedy:

- <u>Please check, if the mixing vat is really not empty! If YES:</u>
  - Empty the mixing vat and start the preparation again.

- <u>Please check, if the mixing vat is really not empty! If NO:</u>
  - Please check the input in "Dry Mixture-Parameter" 12: “Max. Quantity – Mixer not Empty”.
  - Please check the functionality of the scales for the dry mixture.
  - Please check, if the right scales number is entered for the dry mixture in "Recipe Parameter".

Vat is full

The quantity, which should be prepared, (as per quantity calculation) is more than the vat quantity; or the vat is already full, but additional feed should be prepared.

Possible Reason - Remedy:

- If this failure occurs at the beginning of the preparation, the quantity, which should be prepared, is more than the vat contents
  - Check the input in "Special Operating Parameter" 5: “Max. Vat Contents”.
  - Check the input in "Daily Program" (eventually there are wrong inputs for the preparation in "Percentage".)
  - Check the calculated feed quantities in "Stable Plan" (if they are too big: check the inputs in "Feed Strategy".)

- If this failure occurs during the preparation, the max. vat quantity has been reached
  - Check the input in "Special Operating Parameter" 5: “Max. Vat Contents”.
  - Please check, if the quantity, which should be prepared, is in the range of the max. vat contents (put in more feeding times).

Silo is empty

Actuated silo is empty

Possible Reason - Remedy:

- Please check, if the silo is really empty! If YES:
  - Fill the silo again;

- Please check, if the silo is really empty! If NO:
  - Check the silo “EMPTY”-message;
  - Check the “Output Allocation”;
  - Check the functionality of the input module in the control cabinet;

Trough is never empty

A trough of a trough sensor system is always full.

Possible Reason - Remedy:

- Please check, if the concerning trough is really full! If YES:
  - Check, if the feed quantity is too big in "Stable Plan".
  - Check, if animals should be fed at this feeding point.
  - Check, if the indicated valve is fed by a trough probe (eventually this is a standard valve; but there is an input in "Valve Control" in "Feed", which says that a trough probe is available).

- Please check, if the concerning trough is really full! If NO:
  - Check the input in "Special Parameter" 22: “Max. Number of Messages ‘Trough full’!"
  - Check, if the indicated valve is fed by a trough sensor (eventually this is a standard valve; but there is an input in "Valve Control" in "Feed Valves", which says that a trough sensor is available).
  - Check the functionality of trough probes (eventually there might be a short circuit at probes or wiring; or the probe electronic is set too sensitively).

Trough is not full after feeding

A trough is not full after the feeding in a trough sensor-system.

Possible Reason - Remedy:

- Please check, if the concerning trough is really not full! If YES:
  - Check in "Stable Plan", if the feed quantity is too little.
  - Check, if the indicated valve is fed by a trough probe (eventually this is a standard valve; but there is an input in "Valve Control" in "Feed Valves", which says that a trough probe is available).

- Please check, if the concerning trough is really not full! If NO:
  - Check, if the indicated valve is fed by a trough probe (eventually this is a standard valve; but there is an input in "Valve Control" in "Feed Valves", which says that a trough probe is available).
  - Check the functionality of trough probes (eventually there might be a short circuit at probes or wiring; or the probe electronic is set too sensitively).

➢ Please determine in “Special Operating Parameter” 21, if the trough sensors should be controlled after the feeding. (“Control Sensors after Feeding”).

Vitaplus Quantity

The calculated Vitaplus quantity is too much for dispensation.

Possible Reason - Remedy:

Please check the inputs for the Vitaplus-Dispensation

Motor Loss

The motor-circuit switch is switched off.

Use the VSA-module to supervise the motor-circuit switch in the control cabinet. If a motor-circuit switch is switched off during a feeding, this message will be shown.

Possible Reason - Remedy:

- Please check the motor-circuit switch in the control cabinet.
- Please check the setting of the motor-circuit switch and the current consumption of the consumers.

Compressed Air is missing

The system pressure of the plant is not available.

Use the VSA-module to supervise the system pressure of the plant. If a failure of the system pressure occurs during the feeding, this message will be shown.

Possible Reason - Remedy:

- Please check the system pressure (compressor and press switch).
- Please dewater the compressor.

Control Voltage is missing

The 230V-control voltage is missing in the control cabinet.

Use the VSA-module to supervise the 230V-control voltage in the control cabinet. If a failure of the control voltage occurs during a feeding, this message will be shown.

Possible Reason - Remedy:

- Please check the 230V-control voltage (fuse in control cabinet, control trafo, etc.);
- Please check, if the vat cover is closed.

Wrong FP-Recognition

A wrong value is entered in “Valve Control” for the feeding point, which must be actuated. Therefore the feeding point cannot be actuated.

Possible Reason - Remedy:

- Please check the inputs in "Valve Control".

Sensor Value is too small

The read voltage value of the trough sensors for Ad-Libitum-feeding points is too small. ("Special Operating Parameter" 88 "Sensor Test: Lower Limit").

Possible Reason - Remedy:

- Please check the trough sensors. The read sensor values are displayed in "Valve Control".
- Eventually enter a smaller value in "Special Operating Parameter" 88.
- Short circuit on the sensor wiring.

Service Interval Mixer / Pump / Turboclean

The operating hours of the mixer, pump or TC-compressor are higher, than the service interval in “Operating Check”.

Possible Reason - Remedy:

- The mixer, pump and TC-compressor must be maintained as per the corresponding mechanical Operating Instructions. Afterwards set the operating time counter 2 to “0“ in “Operating Check".

Control is not ready

A program point is open on the C-MV-Mode, therefore the feeding computer is blocked and the computer cannot carry out the chosen function.

Possible Reason - Remedy:

- Close program points Scales 1, Scales 2 respectively FP-Control on the CONTROL.

Emergency Operation is active

The Emergency Operation was activated on the CONTOL – thus the activation by the feeding computer is blocked.

Possible Reason - Remedy:

- Stop the Emergency Operation on the CONTROL → read "Operating Instructions” MEGACOMP VISTA and MEGACOMP TABLA".

Failure of the Current Supervision

The current supervision for one or more outputs was approved in "E/A Setup" in "Output Allocation". During the activation of this output it was noticed, that there is no current or that there is current, although this output is not activated.

Possible Reason - Remedy:

- Please check the function of the corresponding output.
- If this output should not be checked, please put the “Output Allocation” right.

No Connection to C-MV

The connection to the C-MV-Mode is blocked.

Possible Reason - Remedy:

- Please check the function of the VC-Bus.
- Please check, whether the C-MV-Number was entered correctly on the CONTROL.
- Please check, whether the C-MV-Number was entered correctly in “Scales Parameter” (in “Ring Parameter”) and “Valve Control”.
- Please check, how many C-MV-Modes were approved in "Special Operating Parameter” 87.

No Connection to C-EA
The connection to the C-EA-Mode is blocked.
Possible Reason - Remedy:
- Please check the function of the VC-Bus.
- Please check, whether the C-EA-Number was entered correctly on the CONTROL.
- Please check, whether the "Output Allocation" was entered correctly.
- Please check, how many C-EA-Modes were approved in "Special Operating Parameter" 86.

C-EA Hand manual missing
There is no C-EA hand manual for an output or input.
Possible Reason - Remedy:
- Please check the "Output Numbers" of the "Output Allocation".
- Please check, how many C-EA-Modes were approved in “Special Operating Parameter" 86.

No Connection to the Scales
The connections to the scales are blocked.
Possible Reason - Remedy:
- Please check, whether the C-MV- Number was entered correctly on the CONTROL.
- Please check, whether the C-MV-Number and the scales numbers in "Scales Parameter" were entered correctly.
- Please check, how many C-MV-Modes were approved in "Special Operating Parameter" 87.
- Please check, whether the right type of scales was entered in "Special Operating Parameter" 4.

Mode is not available
There is no feedback signal of the corresponding mode for the input or output, which should be activated.
Possible Reason - Remedy:
- Please check, whether the inputs in “Output Allocation” were entered correctly.
- Please check the “E/A Setup” in "Output Allocation", whether all modes are recognized.
- Please check the interface and power supply of the corresponding mode in the control cabinet.

No Input / No Output
The activated input or output is assigned to the wrong mode.
Possible Reason - Remedy:
- Please check, whether the inputs in the “Output Allocation” were entered correctly.

Failure of the Output
The activated outputs do not agree with the outputs in the “Output Allocation”.
Possible Reason - Remedy:
- Please check the inputs in "Output Allocation".

Low Battery
The battery (for CPU32F) for the data memory is empty. In the case of a power failure, all data will be deleted.
Possible Reason - Remedy:
- Check the contact between the battery and mounting.
- Change the battery (Type CR2032 / MnO_2-Li - 3Volt/190mAh) on the CPU32F.
  Afterwards:
  - Delete the data memory in "Clear Memory".
  - Set the time and data.
  - Read the data in "Read Flash”.

After Run is too big

Too much feed was prepared of the displayed component or too much feed was dispensed on the displayed valve.

Possible Reason - Remedy:

- If this message is shown during preparation:
  - Check the inputs in "Special Operating Parameter" 6.
  - Check the feeder of the components; (how much feed is brought into the mixing vat, after the feeder unit is switched off).
  - If the after run is really too big, then please eventually set another “Type of Dosage” in "Component Control" (Impulse Dosage, Time Dosage or Automatic Dosage → read "Component Control”).

- If this message is shown during dispensation:
  - Check the inputs in "Special Operating Parameter" 8: Max. After Run (in kg) during Dispensation.
  - Check, whether the corresponding valve closes automatically;
  - Check the after run quantities in "Valve Control" (in order to have smaller after runs, you can eventually feed with open return → read "Valve Control").

- Please check the functionality of the scales and of the load cells.
  Check the cable of the load cell (it might mechanically be damaged by chafe marks or mouse bites; or there is a poor connection at clamping points or solder connections of the load cells).
- Please check, whether the load cells or their cables are wet.
- Please check, whether the scales plug is correctly plugged in.
- Please check, whether earthings are connected according to the connecting diagrams.

Overflow

Too much feed of the entered component was brought into the vat.
("Special Operating Parameter" 7 = Max. Overflow (in kg) of the Components);

Possible Reason - Remedy:

- Check the inputs in "Special Operating Parameter" 6.
- Check the feeder of the components; (how much feed is brought into the mixing vat, after the feeder unit is switched off).
- If the after run is really too big, then please eventually set another “Type of Dosage” in "Component Control" (Impulse Dosage, Time Dosage or Automatic Dosage → read "Component Control”).
- Please check the functionality of the scales and of the load cells.
  Check the cable of the load cell (it might mechanically be damaged by chafe marks or mouse bites; or there is a poor connection at clamping points or solder connections of the load cells).
- Please check, whether the load cells or their cables are wet.
- Please check, whether the scales plug is correctly plugged in.
- Please check, whether earthings are connected according to the connecting diagrams.

Wrong Date/Time

The date or the time is wrong.

Possible Reason - Remedy:

- Wrong input of the date or time. → Enter the date and the time again.

Scales negative

The scales show negative values (the quantity, which should be fed, is bigger than the prepared quantity).

Possible Reason - Remedy:

Check, if the mixing vat is really empty, if NO:

- Carry out a "Total Abort" (The remaining valves can be fed by a "Separate Start" later. Attention: feed quantities, which are manually brought into the mixing vat without "Total Abort", are not recognized).
- Check, if there are enough additional quantities entered in "Recipe Parameter" (for Genpro "Group Parameter"), in order to balance the after runs of the valves.
- Please check, if the valves are correctly closed.
- Check the systems, whose pipes are filled and emptied – check, if the entered pipe contents (in "Ring Parameter") is correctly entered.
- Check the systems, whose pipes are not emptied – check, if the scales value gets smaller during rinsing the pipe before the dispensation. If YES: Maybe a feeding point valve or a return valve does not close correctly and therefore air gets into the pipe.

Check, if the mixing vat is really empty, if NO:

- Carry out a "Total Abort" (The remaining valves can be fed by a "Separate Start" later. Attention: feed quantities, which are manually brought into the mixing vat without "Total Abort", are not recognized).
- Tare the scales on the CONTROL again.

- Please check the functionality of the scales and of the load cells.
  Check the cable of the load cell (it might mechanically be damaged by chafe marks or mouse bites; or there is a poor connection at clamping points or solder connections of the load cells).
- Please check, whether the load cells or their cables are wet.
- Please check, whether the scales plug is correctly plugged in.
- Please check, whether earthings are connected according to the connecting diagrams.

Error Flash Ident / Error Flash-Header

The access to a Flash was not possible.

Possible Reason - Remedy:

- Flash-component is damaged. → Flash-component must be replaced by a new one.

Flash-EPROM FAILURE:

A failure occurred during the access to a safety flash.

Possible Reason - Remedy:

Both Flash-components are defined "Backup defective" – maybe there was a voltage loss during the saving. → Please manually delete the flash, which is defined "Backup defective". Afterwards please try to carry out a Flash-backup again.

Err. Flash delete:

Flash backup cannot be deleted.

Possible Reason - Remedy:

Flash component is damaged. → Flash-component must be replaced by a new one.

Flash cannot be read:

No Flash backup can be read.

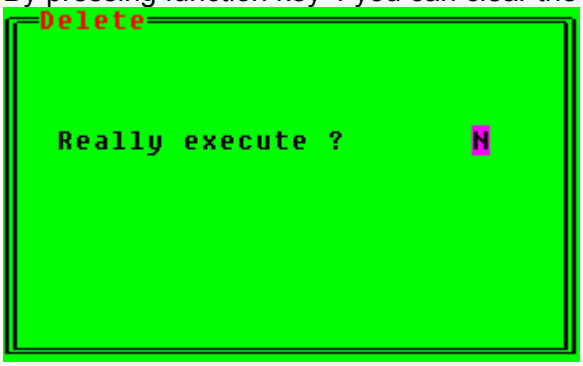
Possible Reason - Remedy:

- Flash-component is damaged. → Flash-component must be replaced by a new one.

Input:

Alarm+warn.lamp off If you acknowledge an alarm or a warning with function key 2, the alarm or warning output is deactivated until it is reactivated by a malfunction again.

clear By pressing function key 4 you can clear the inputs in the “Malfunction Record”:



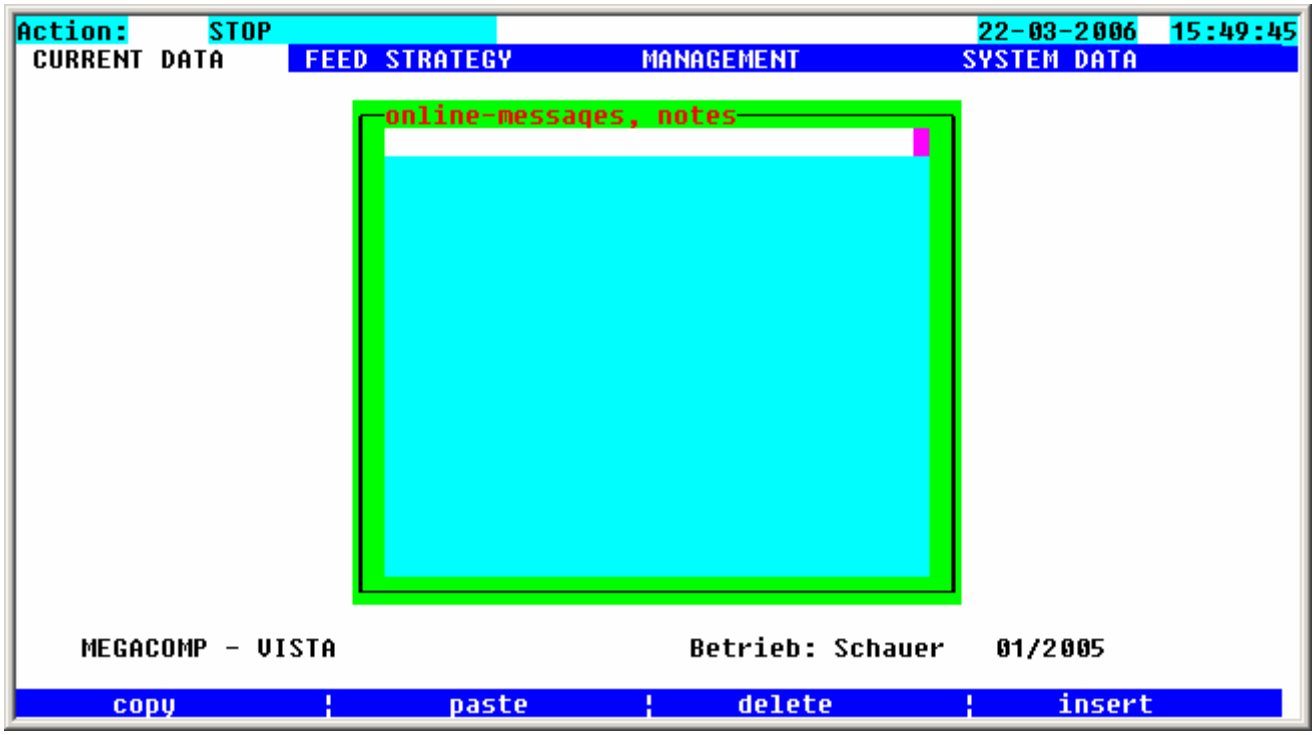
If you want to delete the inputs, please press function key 2**YES**.

2.4.9 Online-Message

With this program point you can send messages between MEGACOMP and PC:

Requirements:

* "Online Program" has to be active on the PC for an online connection to the PC (read Description "PC-Program")
* Set Parameters 68, 73 and 74 correctly in "Special Operating Parameter".
* Interface connection between the feeding computer and the PC must be available.
* This program can be used as an electronic notepad, if no PC is available.



Input:

By using the keyboard, you can write texts, which can be seen on the PC in "Online Transmission" in "Operating Instruction – PC-Program Megacomp MEG Vista and MEG Tabla". A message, which was sent from the PC, can also be seen here.

copy Press function key 1 to copy the line, on which the cursor is placed.

paste Press function key 2 to insert the "copied" line.

delete Press function key 3 to delete the line, on which the cursor is placed.

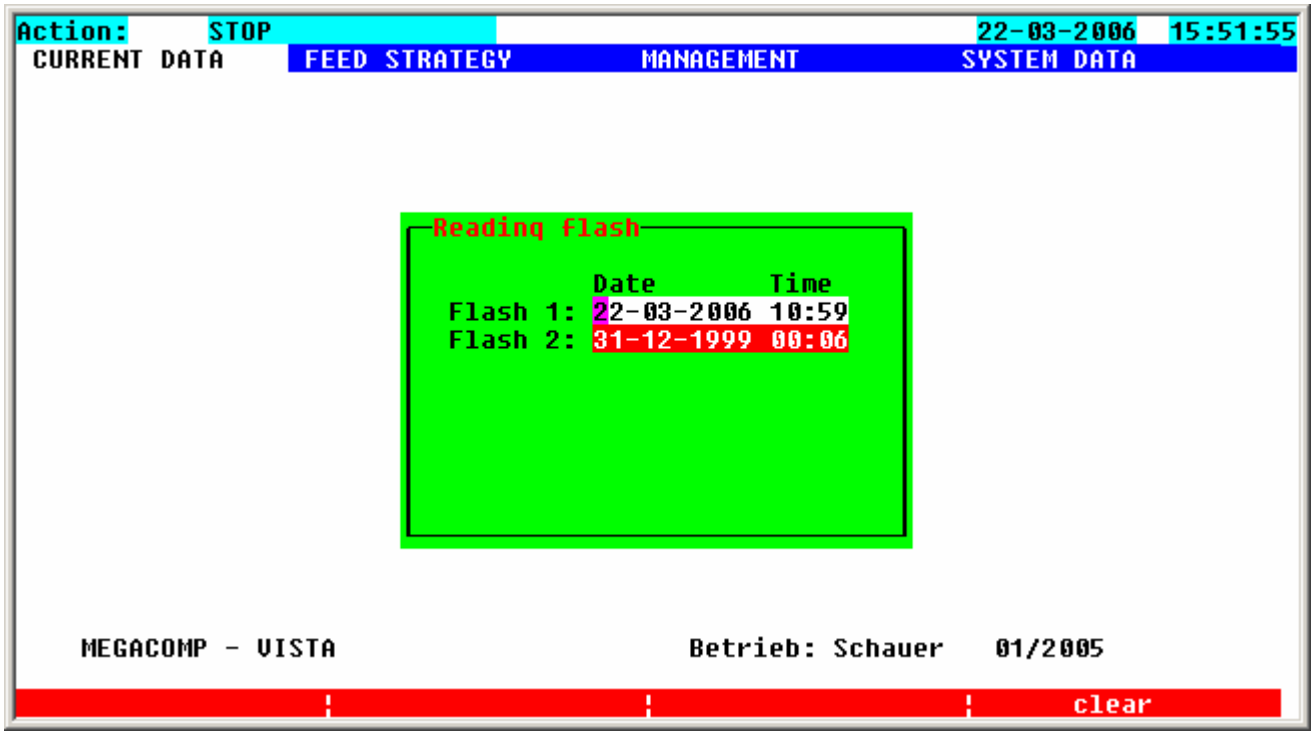
insert Press function key 4 to insert a blank line.

2.4.10 Read Flash

With this program point you can retrieve all the data you have saved on the "Flash Card". (→ Read "Save to Flash"). If a safety backup is called up, all current inputs are overwritten by the data of the backup.

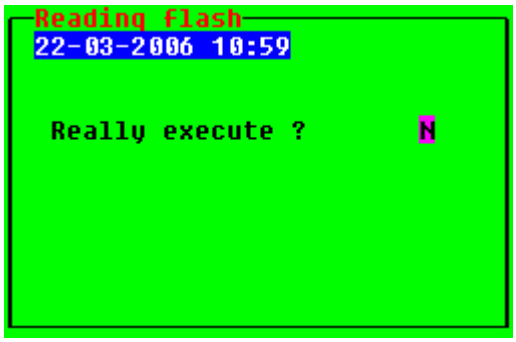
Requirements: * You can only enter this program when no action is active. You can see this in the left upper corner of screen next to Action: "NO" or "STOP".

Input:



The time, when the data were saved, is displayed after every backup. After opening this program point you can use the cursor keys to choose one of the two possible backups, which you want to read.

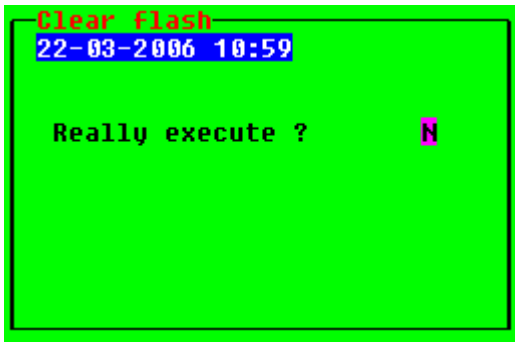
If the cursor is placed on the desired backup, please press the ENTER-key:



Confirm with function key 2 YES.
If the chosen backup should not be read, leave this menu by pressing the ENTER-key.

clear

Press function key 4 to delete a backup: Place the cursor on the line, which shows the backup you want to delete and then press function key 4.
Confirm with function key 2 YES



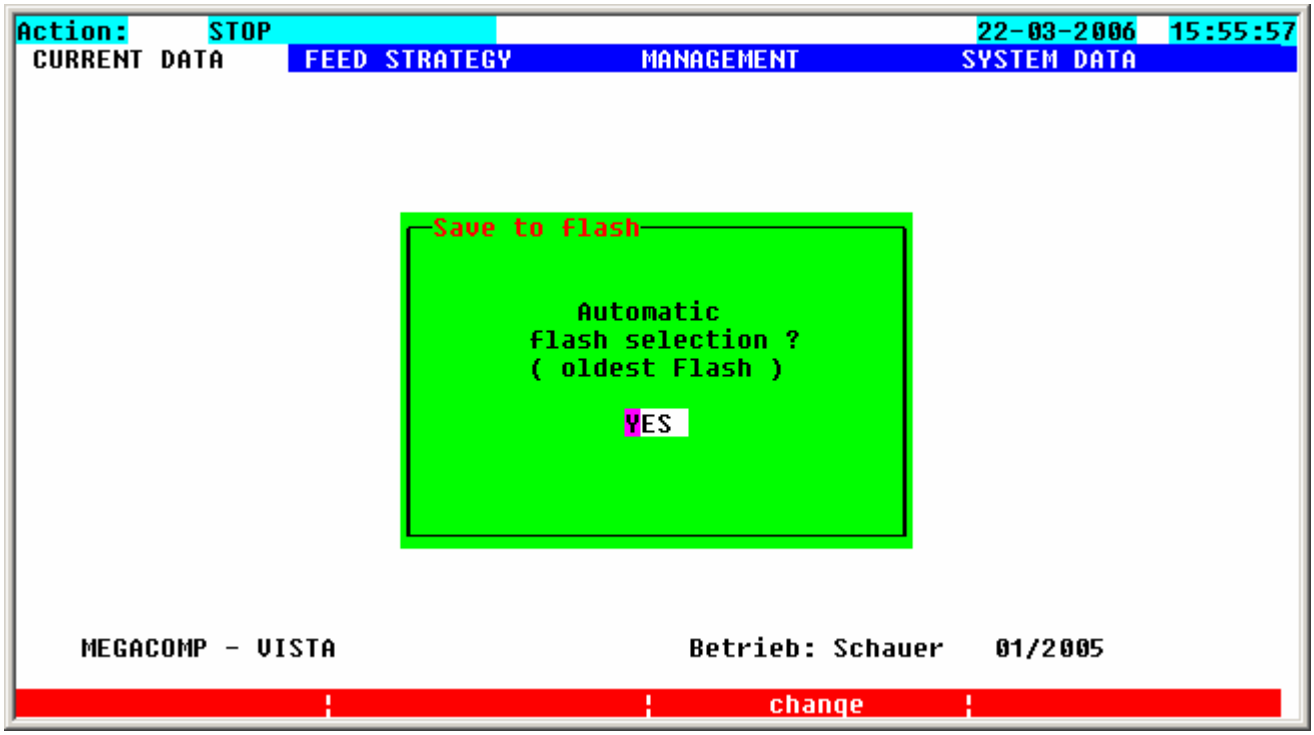
2.4.11 Save to Flash

With this program point you can save all entered data on the "Flash Card".
Up to a maximum of two backup copies can be filed, after that, an existing backup must be overwritten.
After the start of the first activity, an automatic daily backup is carried out.

Requirements:

* Only the "Automatic" has to be active for an automatic backup during the start of the first activity. A second backup with the same date is not allowed to exist.
* For a manual backup with an automatic selection of flash, no backup with today's date is allowed to exist.
* A manual backup and selection of flash is possible anytime.

Input:



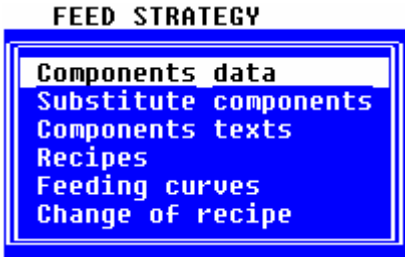
First of all please determine, whether the program should automatically determine the flash for the saving process, or if you would like to safe the data on a certain flash.
Use function key 3 **change**, to make your selection and then confirm with the ENTER-key.

If you choose an automatic selection, the backup data are stored on an empty flash or - if not available – it is saved on the flash with the "oldest" data.

In the case of manual allocation you can determine the flash with the cursor keys. After confirming with the ENTER key, the saving process must be started with function key 2 **YES**.

2.5 FEED STRATEGY

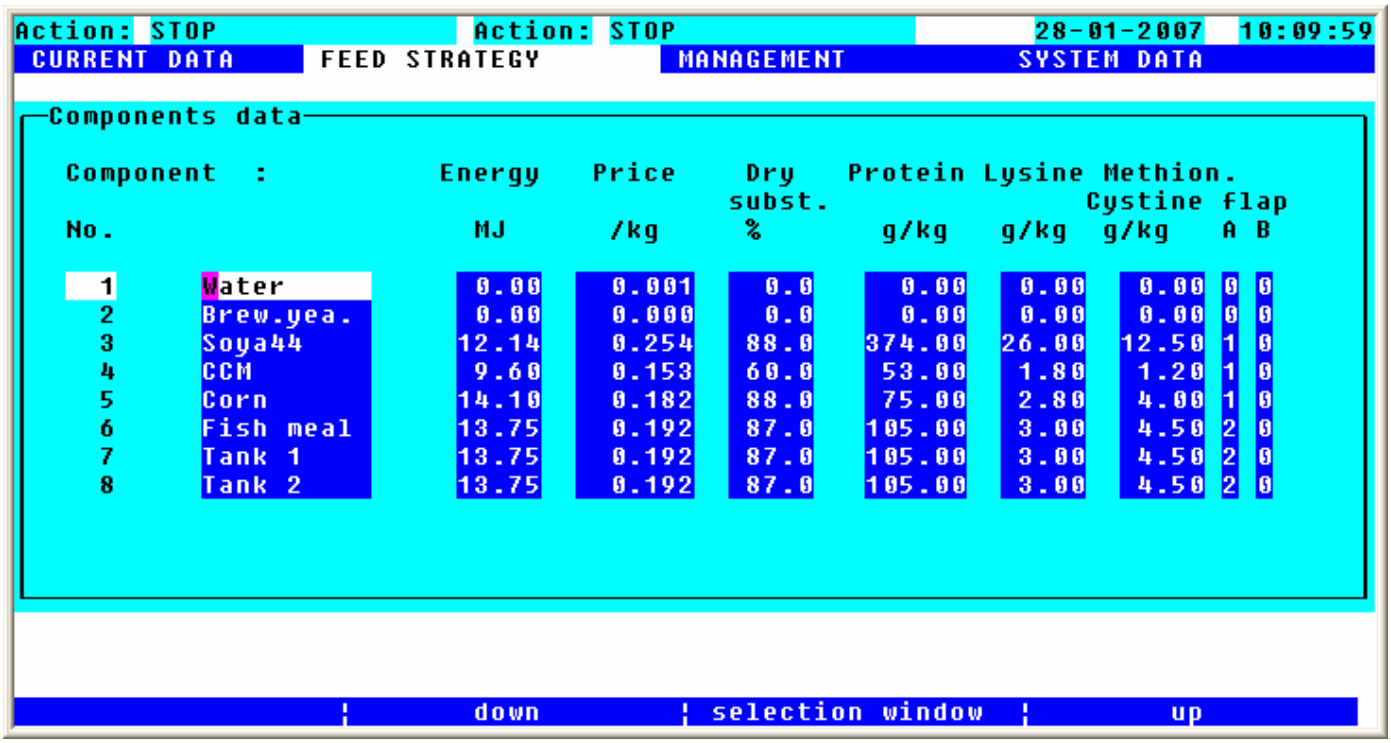
Due to this main program you can put in and show feed data. You can call up the following program points:



2.5.1 Component Data

Here you can see the data of the individual feed components:

Requirements:
* You have to put in the total number of components in “Special Operating Parameter” 3.
* You have to put in the "Component Texts".



Component No.	Component :	Energy MJ	Price /kg	Dry subst. %	Protein g/kg	Lysine g/kg	Methion. Cystine g/kg	flap A	flap B
1	Water	0.00	0.001	0.0	0.00	0.00	0.00	0	0
2	Brew.yea.	0.00	0.000	0.0	0.00	0.00	0.00	0	0
3	Soya44	12.14	0.254	88.0	374.00	26.00	12.50	1	0
4	CCM	9.60	0.153	60.0	53.00	1.80	1.20	1	0
5	Corn	14.10	0.182	88.0	75.00	2.80	4.00	1	0
6	Fish meal	13.75	0.192	87.0	105.00	3.00	4.50	2	0
7	Tank 1	13.75	0.192	87.0	105.00	3.00	4.50	2	0
8	Tank 2	13.75	0.192	87.0	105.00	3.00	4.50	2	0

When entering the different components, it is important that smaller quantities, such as minerals, are entered after the liquid components. During the dosage, the mixer should be switched on after the smallest components, so that the dosage is more exact.

Input:

Component :

Component: At first please adjust the right order of the components. A small list of component names is already saved in the program. You can take over these names into the component list by setting the cursor on the right position. Please adjust with function keys up and down the desired name (so to speak leaf through the list of the component name).
You can even take over the component name into the component list by a selection window. Please press function key 3 selection window and the list of the component names will be shown. Please choose the desired component name by the cursor. Then press the ENTER-key and the component name will be taken over to the component list.

Energy

Energy: Please put in the energy value of every component (in MJ per kg), so that the feed quantity can be calculated.

Price

Price: Here you can put in the price of the animal feed in kg, if you need an evaluation of the feed costs.

Dry subst.

Dry Substance: Put in the dry substance (in percentages) of the component.
Thus you can find out the total dry substance of the feed. By pressing function key 1 change Dry-substance you can automatically change all component data. E.g. If the dry substance is increased by 1 %, all other component data are increased by 1 %, as well.

Protein Lysine Methion. Cystine

Content Numbers (in gram per kg): Here you can put in the content numbers of the following substances: protein, lysine, methionine and cystine. You can use these inputs for a more exact analysis of the contents of feed.

flap

Flap: This is the number of the component flap 1 or 2, which must be opened for preparation. In "General Operating Parameter" 21 and 22 you have to put in an after run time, so that the flap can be activated. In program point “Component Control” you can determine in “Time before the Switch-on of the Component”, after which time (after opening the flaps) the corresponding component should be switched on.

2.5.1.1.1 Option:Coupling with MEGAMIX

The MEGACOMP controls component 2 (even the mixer, if it is released for this component) during the waiting time until the MEGAMIX prepares the required feed quantity. This signal can be used for control purposes. Therefore Component 2 should not be used as a real feed component.

Aufber. M/D

Direct Preparation?

Input M: this component is prepared with MEGAMIX.
Input D: this component is directly prepared on the MEGACOMP.
It is possible, that the MEGACOMP prepares some components itself. In this case, you have to wait until the required feed amount is prepared by the MEGAMIX and until the amount is pumped into the mixing tank of the MEGACOMP. Then the components, which are prepared by the MEGACOMP, are ordered.

Component Data (Average Values):

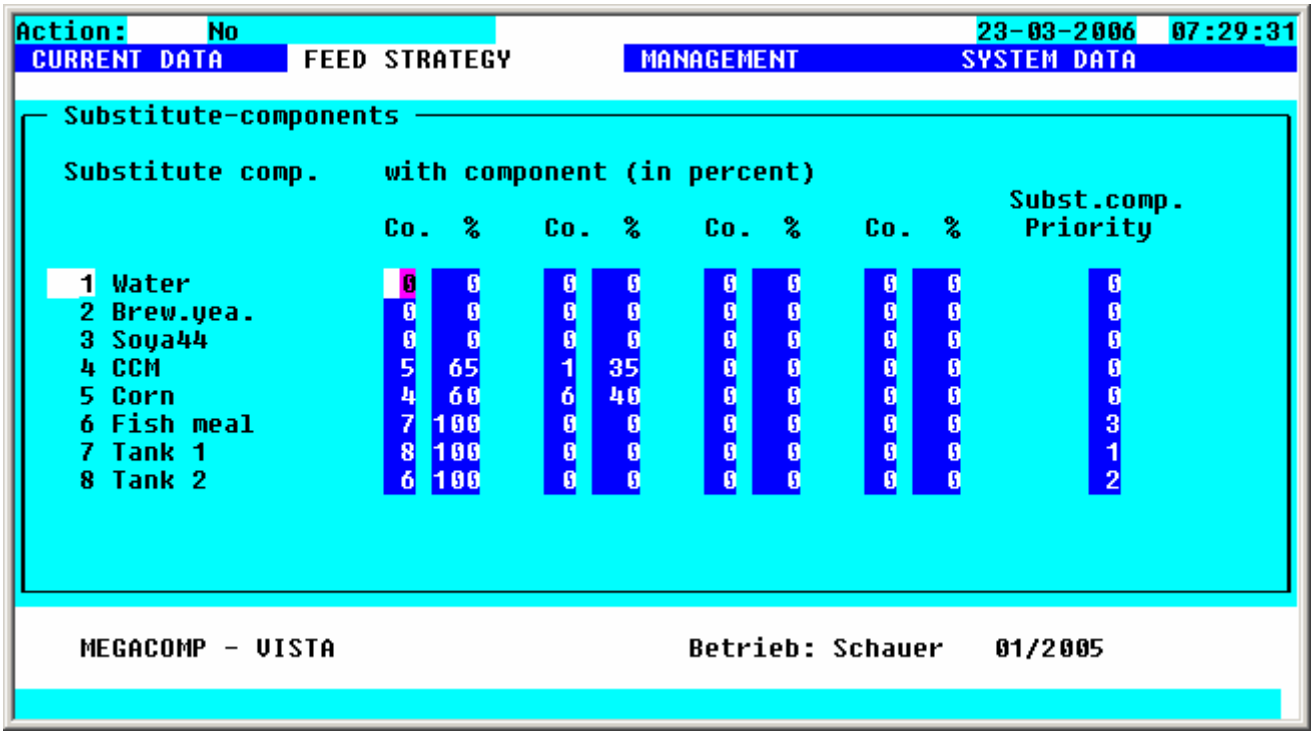
Animal Feed	Energy MJ/kg	GN g/kg	Price	DS %	Ver.E g/kg	Lysine g/kg	M+Cys g/kg	Crude prot%	U.E. MJ/kg
Water	0,00	0		0,0	0	0,0	0,0	0,0	0,00
Whey 5% DS	0,86	55		5,2	6	0,5	0,3	0,8	0,73
Whey thickened	1,60	130		12,0	30	1,0	0,6	2,5	1,50
Yeast liquid	2,85	160		19,2	114	4,0	1,6	11,5	2,40
Skimmed milk	1,37	60		8,6	29	2,0	1,2	3,2	1,15
Winter barley	12,49	712		87,0	78	4,0	4,5	10,3	11,47
Summer barley	12,50	700		87,0	75	4,0	4,5	10,2	11,40
Wheat	13,75	790		87,0	105	3,0	4,5	10,5	12,98
Rye	13,30	760		87,0	90	4,0	3,0	10,0	12,01
Oats	11,32	650		88,0	92	4,0	5,0	10,8	10,55
Corn dry	14,09	800		88,0	75	2,8	4,0	9,5	13,80
Rape extract	10,41	608		89,0	273	18,0	13,0	35,0	10,00
Field bean	12,50	686		88,0	225	16,0	4,8	27,0	11,38
Peas	13,69	763		88,0	196	16,5	5,0	22,6	11,85
Soya 44%	12,10	719		88,0	374	26	12,5	42,5	10,60
Soya 48%	14,17	760		87,0	460	31,0	15,0	48,0	10,80
CCM 36%	9,70	530		64,0	54	1,9	1,3	6,6	9,50
CCM 38%	9,60	525		62,0	55	1,7	1,2	6,5	9,40
CCM 40%	9,60	522		60,0	53	1,8	1,2	6,5	9,40
Fish Meal	14,56	740		91,5	620	55,0	25,0	66,0	12,56
Oat bran	8,70	500		88,0	95	5,0	4,0	14,0	7,00
Barley bran	8,90	520		88,0	100	6,0	4,0	14,0	7,10
Wheat bran	9,07	530		88,0	100	6,0	4,0	15,0	7,28
Rye bran	8,95	520		88,0	100	6,0	4,0	15,0	7,10
Sesame shred	11,67	600		90,9	415	12,0	20,0	45,0	8,67
Lax wholemeal	12,42	740		90,7	280	12,0	12,0	33,5	9,63
Milk powder	14,91	810		94,1	323	25,0	13,0	33,0	12,14
Beet slice	8,41	630		90,6	50	3,5	2,0	8,0	7,12
Blackstrap molasses	10,38	590		77,0	75	0,0	0,0	10,0	10,47
Full cream milk	2,99	170		13,4	33	3,7	1,9	3,5	2,55
Sunflowers	12,40	637		89,0	345	12,8	13,0	39,0	11,60
Corn supplement	12,90	666		88,0	371	25,4	12,2	42,0	11,70

2.5.2 Substitute Components

Here you can put in the substitute components, if one component is empty or if the feeder is damaged:

Requirements:

* The total number of components must be entered in "Special Operating Parameter" 3.
* The "Component Texts" must be put in.
* The order of the components must correctly be entered in “Component Data”.
* The substitute components will be considered, if the “Throughput Quantity” in “Component Control” will not be reached.



You can put in a substitute mixture of the available components for every component.
The substitute mixture will be considered, if the THROUGHPUT of this component (which must be entered in “Component Control”) will not be reached. Then the calculated substitute quantities, which are calculated by the missing component quantity and the entered values in percentages, are added to the component quantities.
Already actuated components are actuated again. The sum of the indicated percentage values for the particular substitute component should be 100%.

Input:

There are two systems for the use of substitute components:

- The priority is set to 0 and you can replace a component in percentages by one or more components. During every new preparation, the origin component is actuated again, that means it is controlled if it is already refilled.

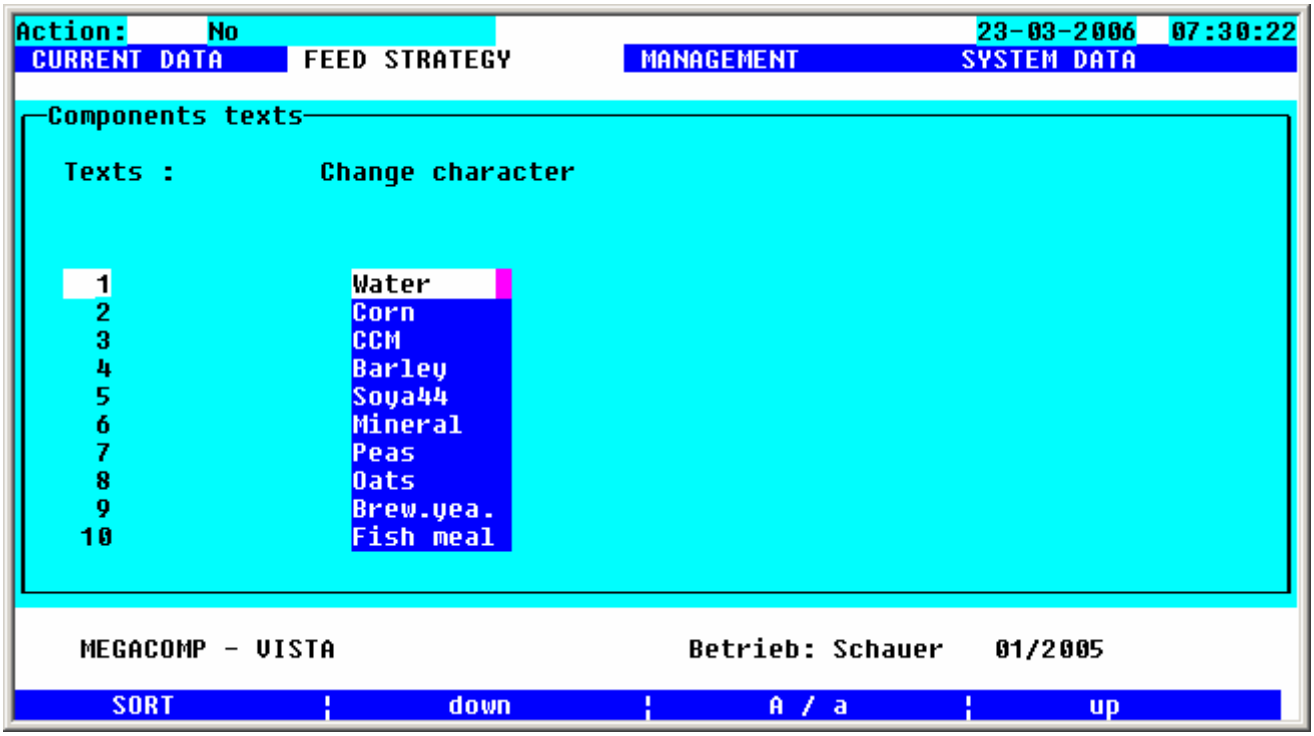
- Priorities are set; please note that every component has to be replaced by 100% of another component. If you replace a substitute component by a new component, you have to make sure that the order of substitute components is correct entered in “Priority”, in order to develop a cycle.
  The difference is that the origin component is not actuated again during a new preparation process.

  The substitute component is actuated instead of the origin component as long as it is finished. Only then the computer actuates the origin component again and controls, if this one is refilled.
  This means that one component after the other is emptied, which develops a cycle. Each change of a substitute component causes a deletion of the old cycle and the cycle will be started in a new order. It is even possible to enter more cycles.

2.5.3 Component Texts

In this program point you can enter component texts or you can change existing component texts.

Input:



For entering a new component text, please set the cursor key to a free component text line. Put in the text by using the keyboard or set the letters respectively numbers by pressing function key 2 **down** and function key 4 **up**. By pressing function key 3 **A / a** you can leaf through (up and down) beginning with letter “A”. By pressing function key 3 **A / a** twice, you can leaf through, starting with small letter “a”.

With function key 1 **SORT** you can sort the list in alphabetical order.

2.5.4 Recipes

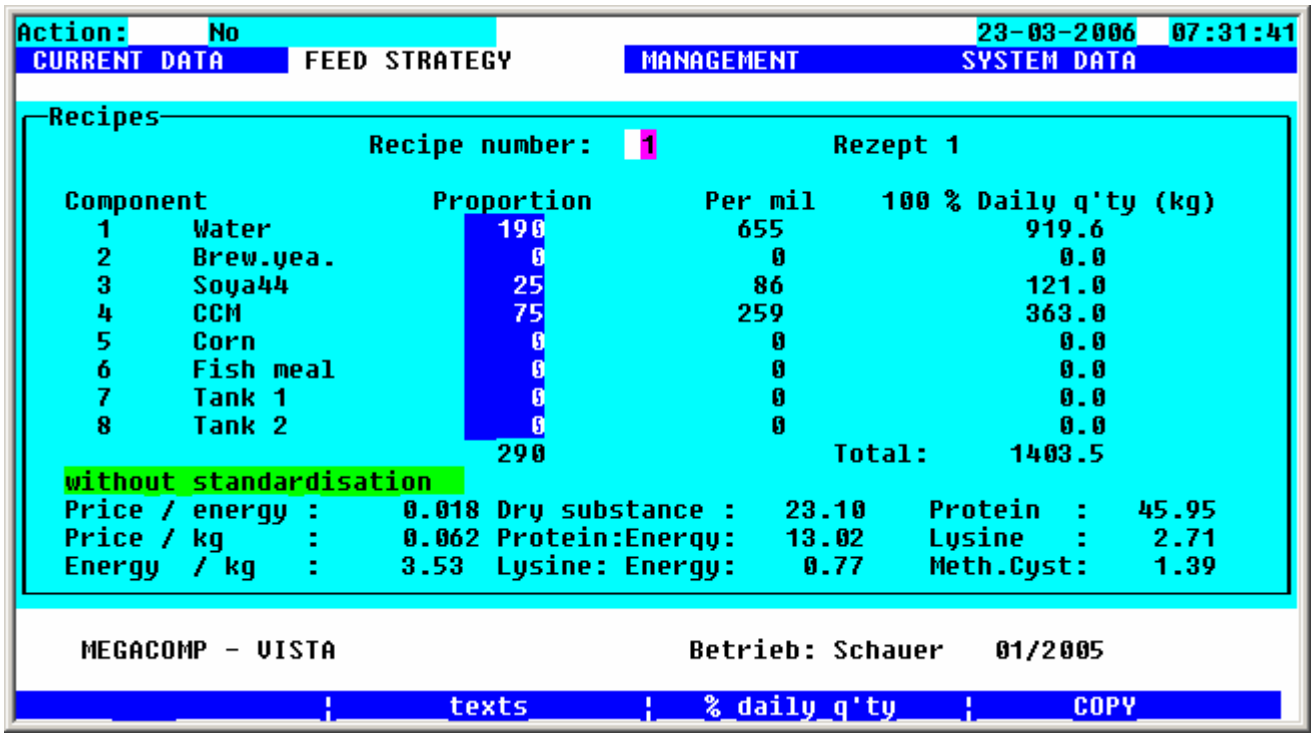
Here you can set the composition of the feed.
There are two possibilities to enter the recipes:

- Either: enter the mixing ratio of all components
- Or: enter the desired dry substance of the feed and the mixing ratio of the components, without the liquid components.

Recipe as per Mixing Ratio:

Requirements: * The "General Operating Parameter" 17 must be set to "0".
* All component data must be entered.
Minimum input: Energy and dry substance

Input:



Recipe number: **Recipe Number:** Choose the "Recipe Number", which you want to set or change. You can enter a text for any recipe by pressing function key 2 **Texte**. Read "Component Text" if you want to enter a text.

Component **Component:** The number and name of the components are displayed here.

Proportion **Proportion:** Put in the proportions of each single component

Per mil **Per mil:** The proportions of the components are automatically recalculated in per mil.

Daily q'ty **Daily Quantity:** This is the quantity (in kg), which is required per day by the displayed recipe. Please determine by pressing function key 3 **% daily q'ty**, how many percentages of the daily quantity should be displayed.

Price / energy Dry substance **Price/Energy/Dry Substance.....:** Additionally you will have an overview of different recipe data on the lower side of the screen.

Recipe as per Dry Substance:

Requirements:

* The "General Operating Parameter" 17 must be set to "1" (or "2").
* All component data must be entered.
  Minimum input: Energy and dry substance
* Component 1 must be the liquid component.

Input:

```
Action:      No                                          23-03-2006   07:41:22
 CURRENT DATA    FEED STRATEGY        MANAGEMENT          SYSTEM DATA

 Recipes
                    Recipe number:  1            Rezept 1

  Component              % Dry Subst.     Per mil     100 % Daily q'ty (kg)
    1      Water              190            646                895.9
    2      Brew.yea.            0              0                  0.0
    3      Soya44              25             66                 91.1
    4      CCM                 75            289                400.8
    5      Corn                 0              0                  0.0
    6      Fish meal            0              0                  0.0
    7      Tank 1               0              0                  0.0
    8      Tank 2               0              0                  0.0
                                                     Total:     1387.8
  without standardisation
  Price / energy :      0.017 Dry substance :   23.10    Protein  :   39.85
  Price / kg     :      0.062 Protein:Energy:   11.17    Lysine   :    2.23
  Energy  / kg   :      3.57  Lysine: Energy:    0.62    Meth.Cyst:    1.17

   MEGACOMP - VISTA                      Betrieb: Schauer    01/2005

                    ¦        texts        ¦   % daily q'ty    ¦       COPY
```

Recipe number: **Recipe Number:** Choose the "Recipe Number", which you want to set or change. You can enter a text for any recipe by pressing function key 2 Texte. Read "Component Text" if you want to enter a text.

Component **Component:** The number and name of the components are displayed

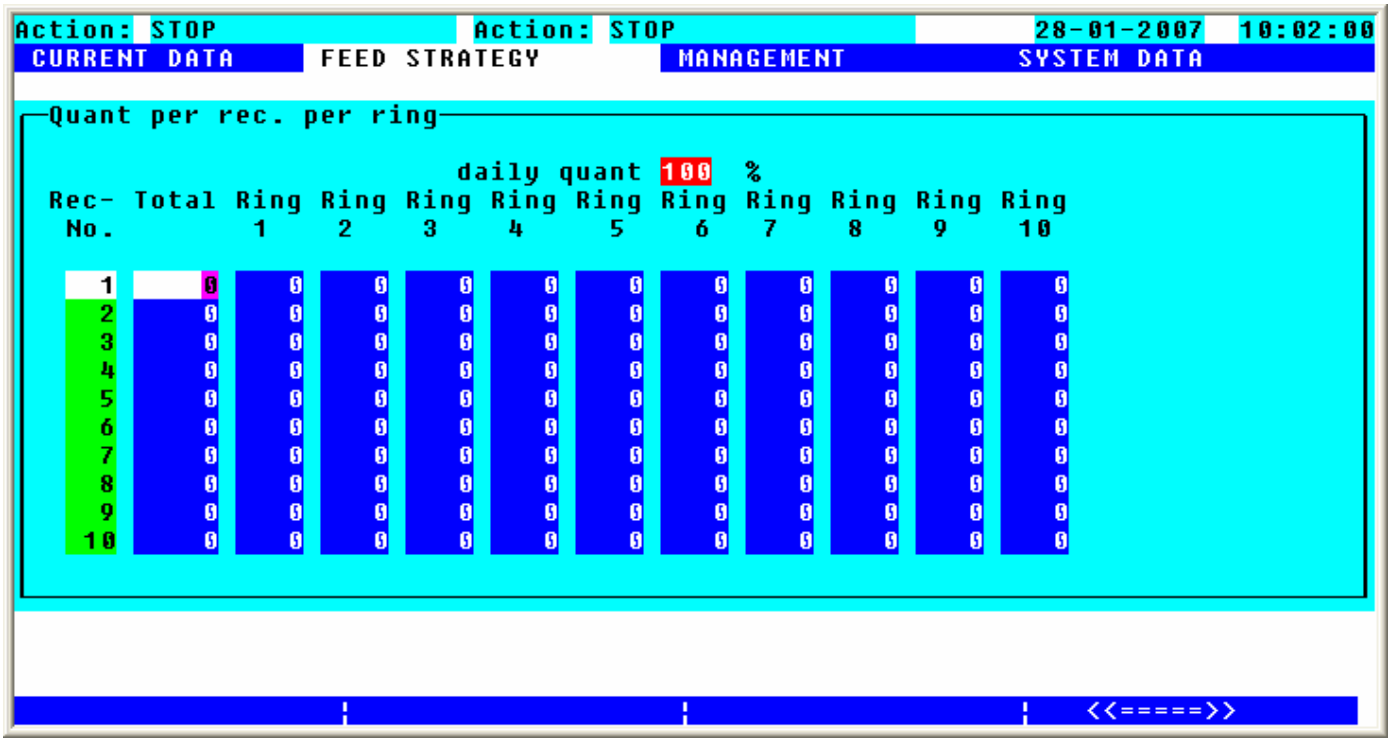
Dry substance : **% Dry Substance:** Set the cover of the total dry substance proportionally by the separate components; except component 1, in column “% Dry Substance”. The proportions of component 1 will be set automatically, so that the desired total dry substance will be reached.
Due to the input of the cover proportions of the dry substance, the recipe stays the same, even in the case of different dry matter contents of a component. If “2” is entered in "General Operating Parameter” 17, you can enter the mixing ratio for every component. The proportions of component 1 will be set automatically, so that the desired total dry substance will be reached.

Per mil **Per mil:** The proportions of the components are automatically recalculated in per mil.

Daily q'ty **Daily Quantity:** This is the quantity (in kg), which is required per day by the displayed recipe. Please determine by pressing function key 3 % daily q'ty, how many percentages of the daily quantity should be displayed.

Price / energy Dry substance **Price/Energy/Dry Substance.....:** Additionally you will have an overview of different recipe data on the lower side of the screen.

Ring quant./rec. Durch Drücken der Funktionstaste 3 unter "% Tagesmenge", können Sie die benötigten Futtermengen, für die einzelnen Rezepte für jeden Ring, einsehen.



Ring quant./group By pressing function key 2 under "% daily quantity", you can view the required feed quantity for individual groups for each ring.

COPY Press function key 4 to copy an existing recipe:

Please determine, from which recipe **From recipe** you want to copy data into a new recipe **To recipe**. Copying is carried out after pressing ENTER after having pressed function key 3 **change** for **Run** **YES**.

mark Use function key 3 to mark the two components with an asterisk *, whose mixing ratio you want to optimize.

optimise By pressing function key 2, the proportion of the first, marked component is increased and the proportion of the second one is decreased. Press function key 4 and the proportion of the first marked component is decreased and the proportion of the second one is increased.

Standardisation The energy and contents of the feed can be referred to the percentage value in "Special Operating Parameter" 61 of the presumed dry substance. Thus you can compare different recipes with the same dry substance. By pressing function key 1 ("Standardization") you can activate and reset the standardization.

2.5.5 Feed Curves

Here you can determine the feed curves, as per which the animal should be fed.
Every feed curve can have up to 20 different steps.

Requisites:

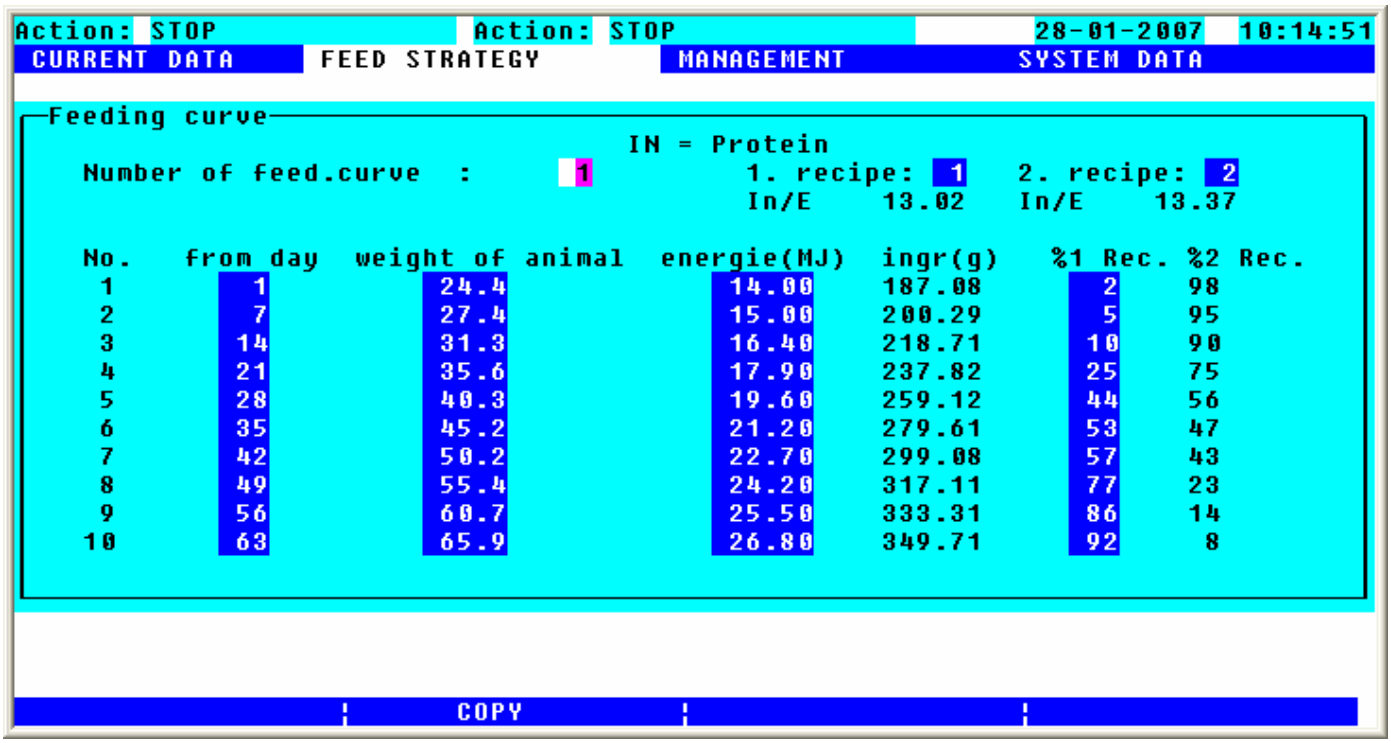
* A recipe with less protein and more protein must be inserted.
* At "Special Operating Parameter" 83 you have to decide, if the content amount of protein or lysine shall be inserted.
* Depending on "Special Operating Parameter" 84 the default for creating of mixtore of two recipes can be changed. You can change the percentage amount of firstrecipe (less-protein fodder) or insert content amount.

Input:

Insert, which recipes are used for calculation.
1. Recipe = less protein (less lysine) recipe
2. Recipe = more protein (more lysine) recipe
Under recipes the content amount / energy is shown.

Additionally to energy default you have to insert defaults for protein and lysine.

If you change a recipe in the feed curve; you also have to control the feed curve, because value of content amount is calculated from values of recipes and thoose quota of section.



IN =

Gehaltszahlen in: Anzeige ob die Gehaltszahlen von Eiweiß oder Lysin angegeben werden.

Number of feed.curve :

Nummer der Futterkurve: Wählen Sie die "Futterkurvennummer" aus, von der Futterkurve, die Sie erstellen oder ändern wollen.

1. recipe

1.Recipe: Insert the recipe number of less protein fodder. Beneath there are automatically shown the content amounts of protein and lysine.

2. recipe

2.Recipe: Insert the recipe number of more protein fodder. Beneath there is automatically shown the content amount of protein or lysine (content amount must be higher than from 1. recipe).

from day

Feeding day: Insert the days, at which a change of animal weight or energy shall happen. Program calculates automatically curve drain. It will be overcalculated between individual points, that means the assigned fodder portion will daily increase instead of increasing too much in one time.

weight of animal

Animal weight: (in kg) Insert that weight, which the animal shall theoretic reach at the inserted feeding day.

energie(MJ)

Energy: (in MJ) Insert the amount of energy, which the animal shall get at the inserted feeding day and animal weight per day.

ingr(g)

Content amount: Content amounts (protein or lysine) in grams of mixture 1. recipe and 2. recipe.

%1 Rec.

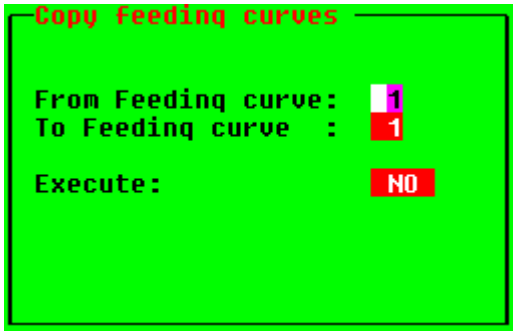
Percent 1.Recipe: Quota of less protein recipe.

%2 Rec.

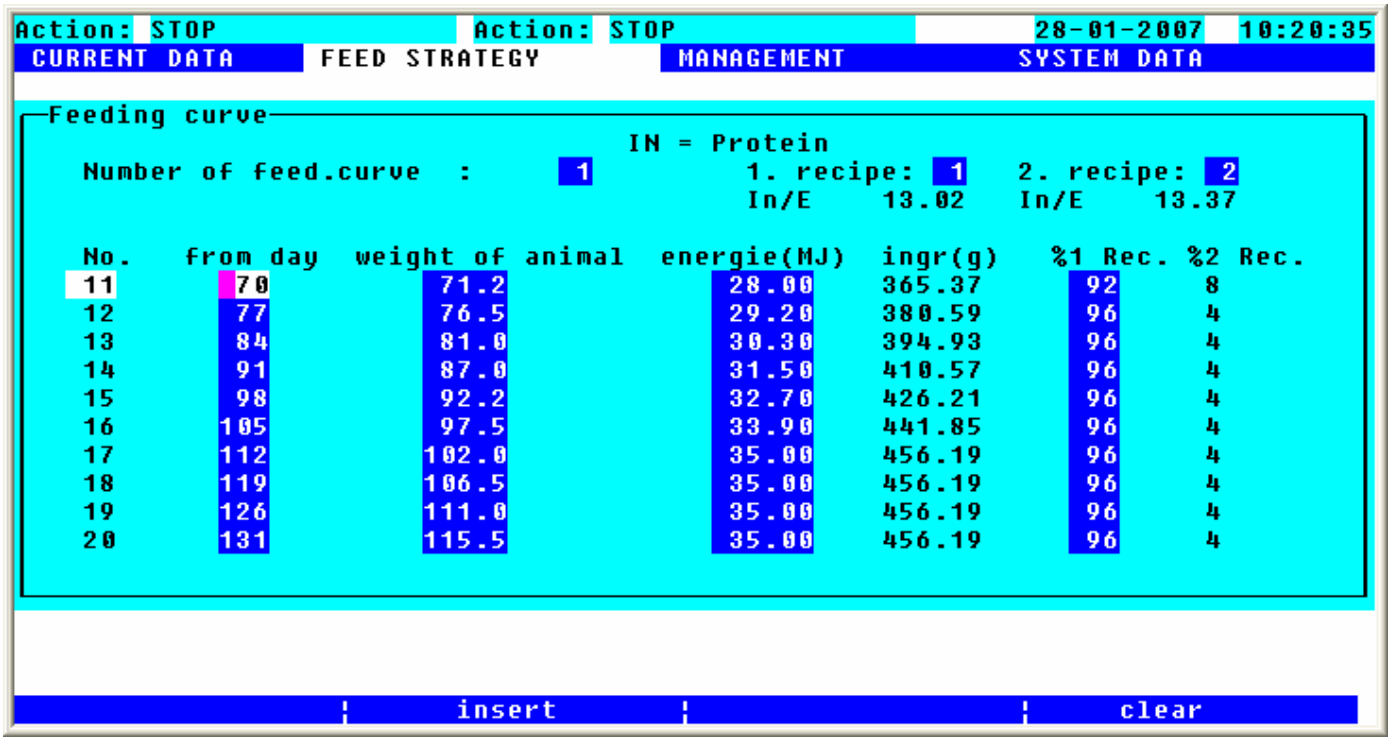
Percent 2.Recipe: Quota of more protein recipe.

COPY

By pressing function key 2 you can copy feed curves.



Please determine, from which feed curve you want to copy data into a new feed curve. Copying is carried out after pressing ENTER after having pressed function key 3 change “Execute”: “Yes”.

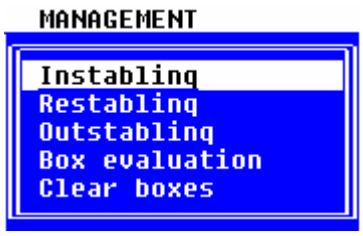


insert Press function key 2 to insert blank lines between two lines.

clear Press function key 4 to delete the line, in which the cursor is at the moment.

2.6 MANAGEMENT

This is the main program, which is used for evaluations of the system. The main program "MANAGEMENT" consists of the following subprograms:

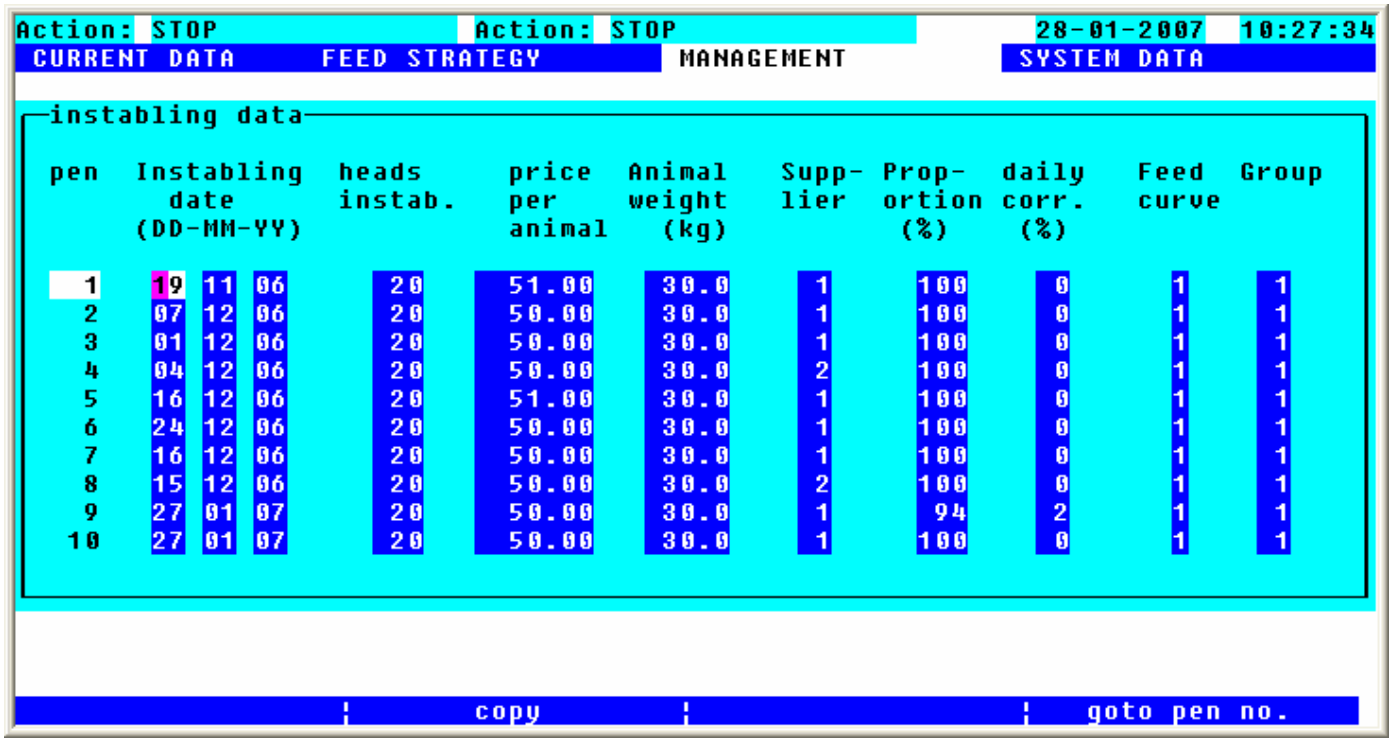


2.6.1 Instabling

Here you have to put in all information concerning the instabling of a feeding point.

Requirements: * An evaluation of the plant is desired.

Input:



pen	Instabling date (DD-MM-YY)	heads instab.	price per animal	Animal weight (kg)	Supp-lier	Prop-ortion (%)	daily corr. (%)	Feed curve	Group
1	19 11 06	20	51.00	30.0	1	100	0	1	1
2	07 12 06	20	50.00	30.0	1	100	0	1	1
3	01 12 06	20	50.00	30.0	1	100	0	1	1
4	04 12 06	20	50.00	30.0	2	100	0	1	1
5	16 12 06	20	51.00	30.0	1	100	0	1	1
6	24 12 06	20	50.00	30.0	1	100	0	1	1
7	16 12 06	20	50.00	30.0	1	100	0	1	1
8	15 12 06	20	50.00	30.0	2	100	0	1	1
9	27 01 07	20	50.00	30.0	1	94	2	1	1
10	27 01 07	20	50.00	30.0	1	100	0	1	1

Box	**Box:** Select the number of box with the cursor, in which you want to stable in;
Instabling date	**Instabling date**
No. of animals instab.	**Number of animals**

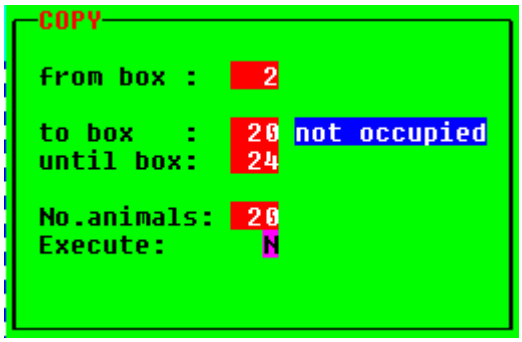
Price per animal	**Price per young pig**
Animal weight	**Average instabling weight of animals**
Supp-lier	**Number of the pig supplier**

You can additionally enter the most important data for the stable occupancy here:

Prop- ortion Daily corr.	**Adaptation in percentages to the feed curve**
Rec.	**Number of recipe**
Feed. curve	**Number of feed curve**
Group	**Group:** Instead of a recipe the group is inserted. So, animals belonging to the same group, can be fed together, although they have different feeding curves.

If in "Stable Plan" the animal quantity is 0 for the corresponding feeding point, the instabling data of a feeding point (animal weight and quantity) are taken over in “Stable Plan”, when leaving the program point. (If the animal quantity is ≠ 0: the instabling data of a feeding point are not taken over into the "Stable Plan").

COPY By pressing function key 2 you can copy the entered data of a feeding point into one or several feeding points.
In column from box you enter the feeding point, which should be copied and in column to box you can determine from which feeding point on you want to start copying. In column until box you determine the end feeding point, i.e. up to which feeding point you want to copy the values. In column No.animals you can correct the number of animals.
By pressing function key 2 YES you will start copying. If a feeding point is occupied you will get the message OCCUPIED ! and the warning Execute: N WARNING ! . If you really want to take over the values into the occupied feeding point you have to press function key 2 YES again.



calculate If you place the cursor on columns “Number of Animals”, “Animal Price” or “Animal Weight”, you can convert the total animal quantity, the total weight and the total price to one animal by pressing function key 3. If you press the ENTER-key after the input of the correct values you can correct the “Price of Animal” and the “Animal Weight” in this line.

from pen no. By pressing function key 4 you can determine, which number of feeding point you want to change. After pressing the ENTER-key, the program changes automatically to the desired line.

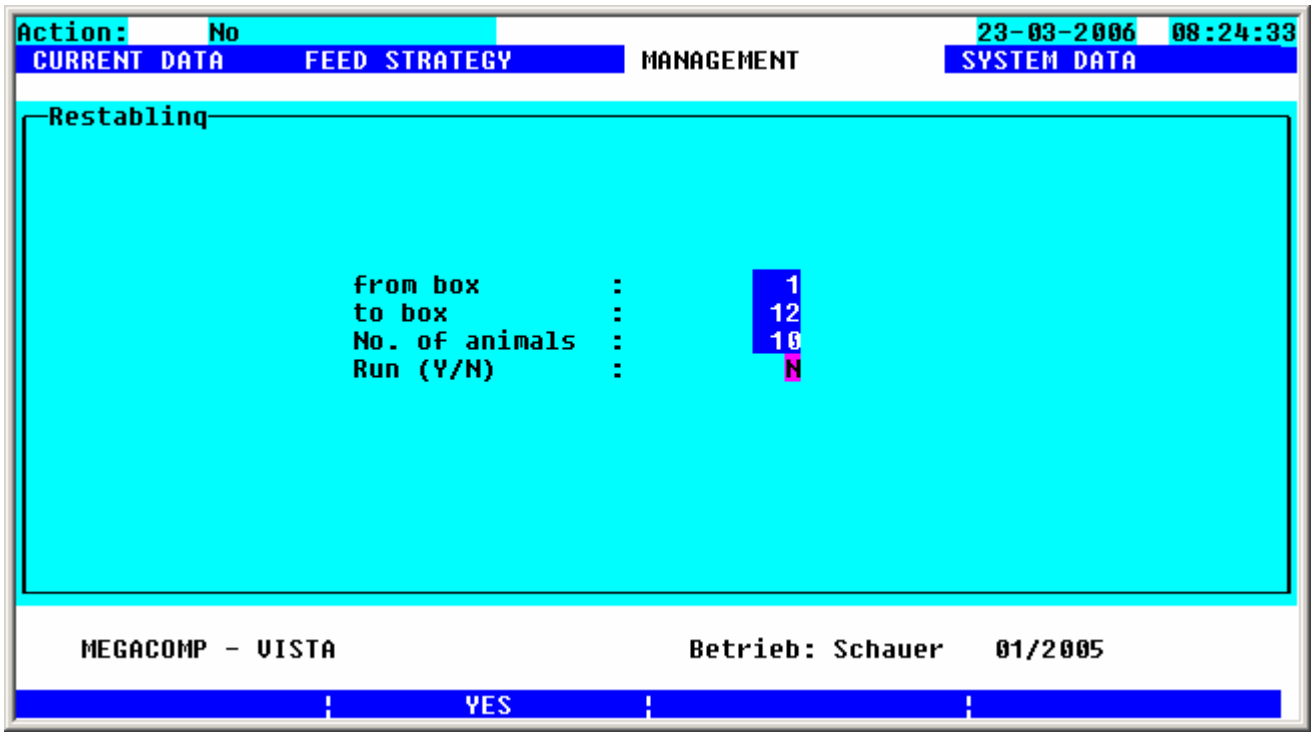
2.6.2 Restabling

If you wish to restable animals (e.g. if a pre-fattening area is available) you can take over all animal data, such as age, number, consumption,... from one feeding point to one other. The data of the start feeding point are deducted as per the number of animals and they are added to the target feeding point. If animals of different ages are combined, an average of the data will be built.

Requirements:
* You have to put in all data in "Stable Plan" or in "Instabling".
* The feeding point, in which you want to restable animals, must be free.

Input:

E.g. 10 animals are restabled from box 1 to box 12.



from box : This is the feeding point, from which animals are taken out.

to box : This is the feeding point, in which the animals are put in.

No. of animals : This is the number of animals, which are restabled.

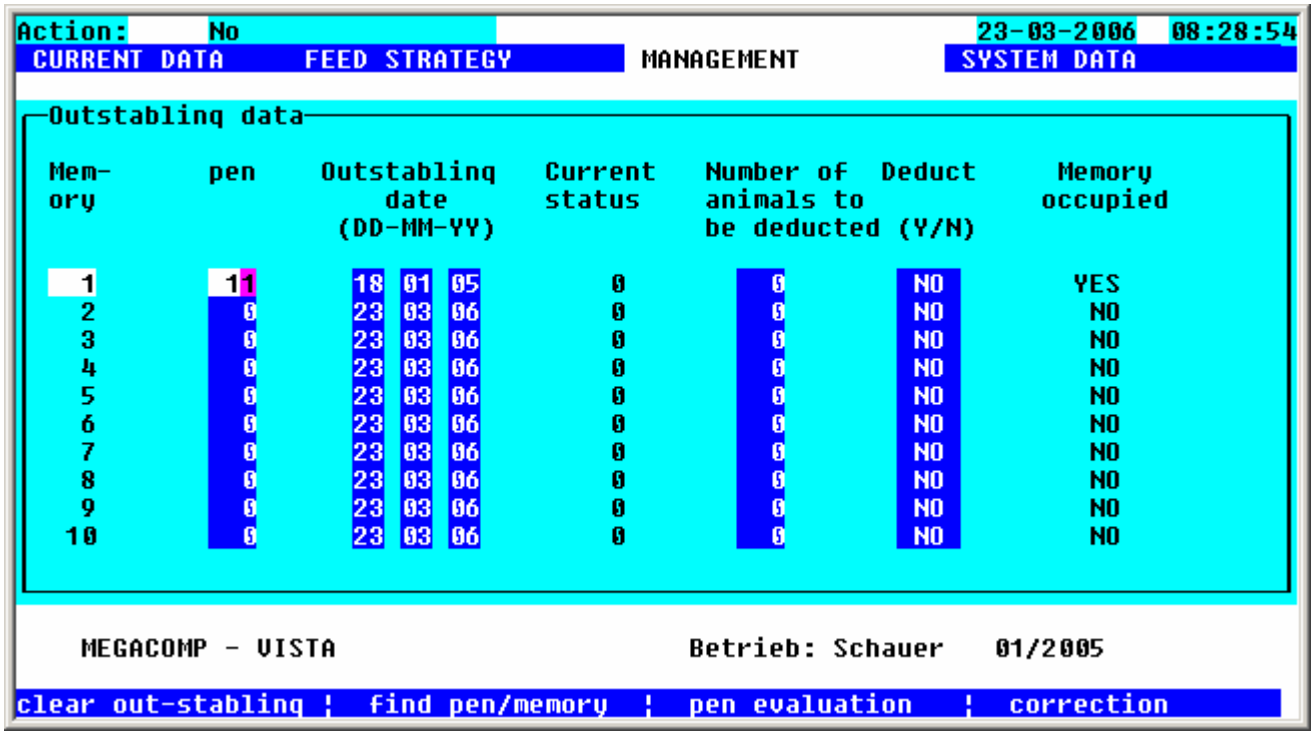
Run (Y/N) : Press function key 2 **YES** and the restabling will be carried out. You can repeat this process as often as you like. Press the ENTER-key in order to leave this program point.

2.6.3 Outstabling

Here you can put in all data, which are necessary for the sale of the animals.

Requirements: * The animals, which should be outstabled, must have been instabled in “Instabling”.

Input:



Mem-ory	pen	Outstabling date (DD-MM-YY)	Current status	Number of animals to be deducted	Deduct (Y/N)	Memory occupied
1	11	18 01 05	0	0	NO	YES
2	0	23 03 06	0	0	NO	NO
3	0	23 03 06	0	0	NO	NO
4	0	23 03 06	0	0	NO	NO
5	0	23 03 06	0	0	NO	NO
6	0	23 03 06	0	0	NO	NO
7	0	23 03 06	0	0	NO	NO
8	0	23 03 06	0	0	NO	NO
9	0	23 03 06	0	0	NO	NO
10	0	23 03 06	0	0	NO	NO

Mem-ory — Serial number (which is independent of the number of the feeding point)

pen — This is the feeding point, from which you want to outstable animals

Outstabling date — Date of outstabling; date of sale

Current status — Number of animals, which are on this feeding point, at the moment

Number of animals to be deducted — Number of the sold animals

Deduct — Confirm the outstabling, so that the inputs are taken over into the evaluation

Memory occupied — Here you can see, whether data were already saved on this memory.

Outstabling:

- You can optionally assign a certain feeding point number to each of the 400 memories.

- The number of the available animals is automatically taken over from the “Stable Plan” to column Current status as soon as you have entered a number in pen.

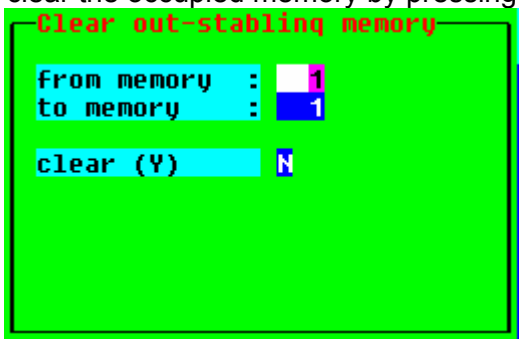
- You have to put in the number of the sold animals in column Number of animals to be deducted

- The animals are deducted from the current animal quantity, if you press function key 2 YES in column Deduct. (The animal quantity is corrected in “Stable Plan” on the corresponding feeding point). Besides, the consumptions (costs per valve) for the remaining animals are recalculated.

- In column Memory occupied you can see, whether the message buffer is occupied. The message buffer is occupied, when animals were deducted. The animals are taken over in the “Pen Evaluation” after the deduction. If you do not need the values of the deducted feeding point (=occupied memory) any longer, you can clear the memory.
  Thus the memory is free again and in column "Memory occupied" you can see “No".

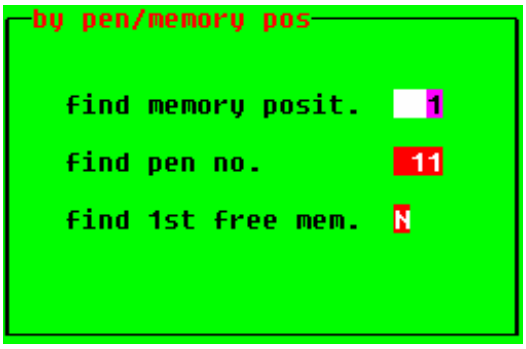
Clear memory

You can clear the occupied memory by pressing function key 1:



find pen/memory

By pressing function key 2 you can open this template:



find memory posit. **Search Memory Position:** If you put in the memory number and if you press the ENTER-key, the cursor changes to the desired memory position.

find pen no.

Search Box Number: If you put in the number of feeding point and if you press the ENTER-key, then the cursor changes to the desired feeding point.

find 1st free mem.

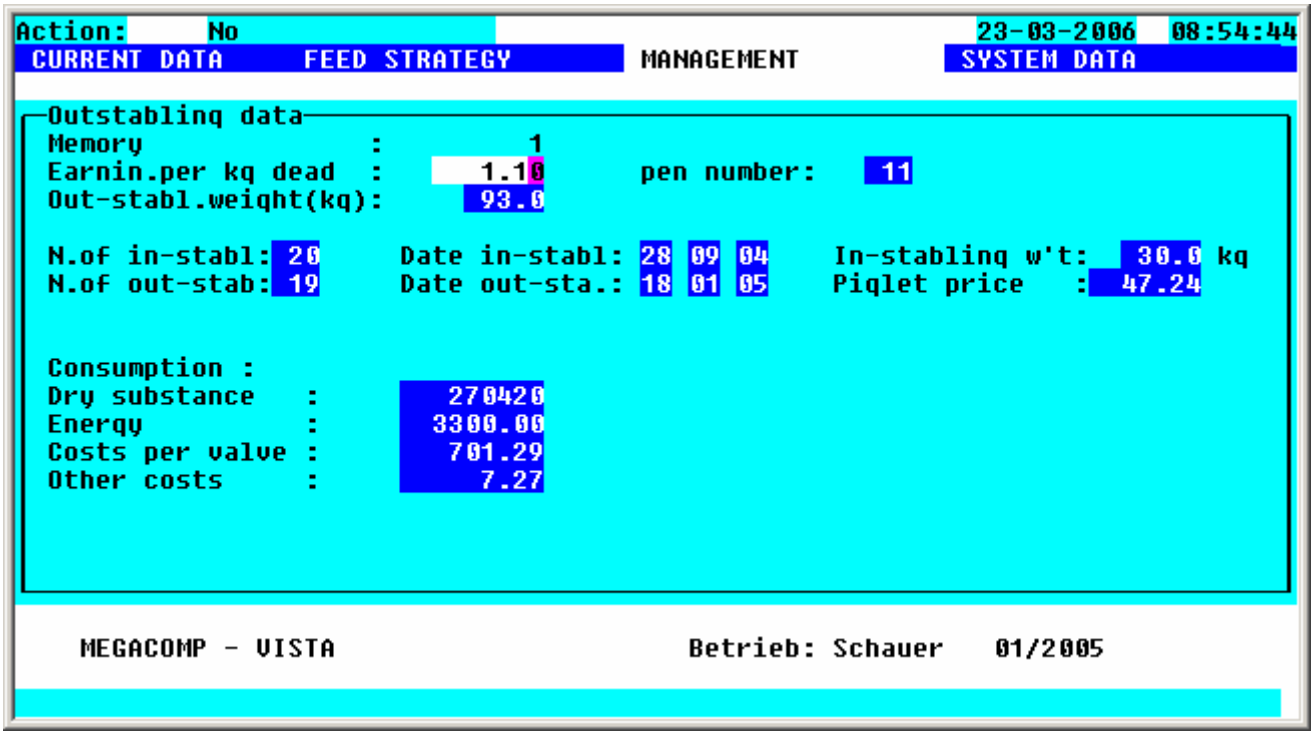
Search 1. free Memory: By pressing function key 2 JA, the cursor changes automatically to the first free memory position.

pen evaluation

By pressing function key 3, you can directly change to program point "Pen Evaluation".

correction

By pressing function key 4 you can correct different values.



After deduction of the memory you can change several values in “Correction”. All changes will be registered in "Pen Evaluation" after leaving this subprogram. Corrections can only be made, as long as the memory is occupied.

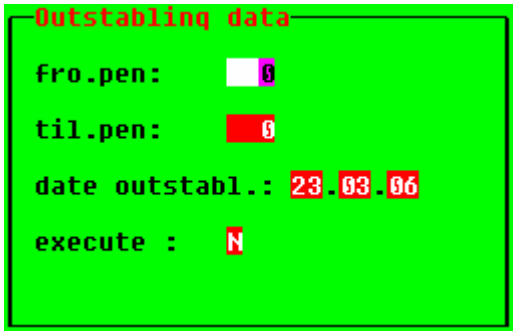
Please place the cursor in column Outstabling date; in **DAY** DD you will have a new definition of the function keys:

Sort by pen no. Press function key 2 and the inputs will be sorted as per the number of feeding points.

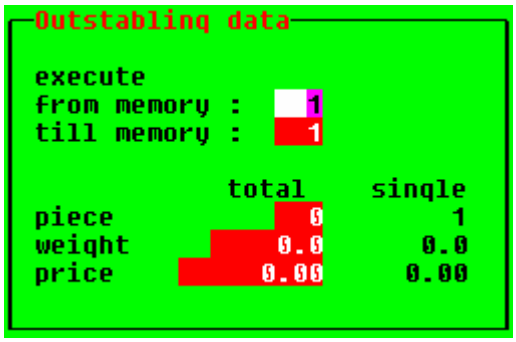
Sort by date Press function key 3 and the inputs will be sorted as per the date.

Clear memory Here you can delete occupied memories by pressing function key 4.

Outstabl. from/to Press function key 2 in column "Number of animals to be deducted" in order to outstable all the animals from different feeding points at the same time:



Selling from/to Press function key 3 in column "Number of animalsto be deducted" in order to take over the outstabling data for several memories at the same time.
Put in the total number of the outstabled animals, the total weight of the animals and the total profit of the animals.
Afterwards determine the memory numbers, which should take over these values.



2.6.4 Box Evaluation

It enables you to calculate the profit margin:

Requirements: * The animals of the feeding points must be instabled in "Instabling" and must be outstabled in “Outstabling“.

Input:

```
Action:      No                                                  23-03-2006   09:29:07
 CURRENT DATA      FEED STRATEGY          MANAGEMENT            SYSTEM DATA

 pen evaluation
  Memory                 :          1
  Earnin.per kq dead     :       1.10    pen number    :     11
  Outstabl.weight (kq):        93.0    Fatten. days  :    112

  No. of inst. :  20     Inst. date    : 28 09 04     Inst. weight    :  30.0  kq
  No. of outst.:  19     Outst. date   : 18 01 05     Daily gain      :  0.770 kq

  Feed utilisation : 3.135 kqDS/kq    31.89 %kq/kqDS     38.26  MJ/kq    26 q/MJ
  Loss             :          1    Animal(s)             5.00   %

  Profit evaluation          total    per animal
  Piglet price             944.80      49.73
  Feed costs               701.29      36.91
  Other costs                7.27       0.38
  Earnings                1943.70     102.30
  Profit contribution      290.34      15.28

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                    !        down        !       selection     !        up
```

Overall view of several memories and feeding points:

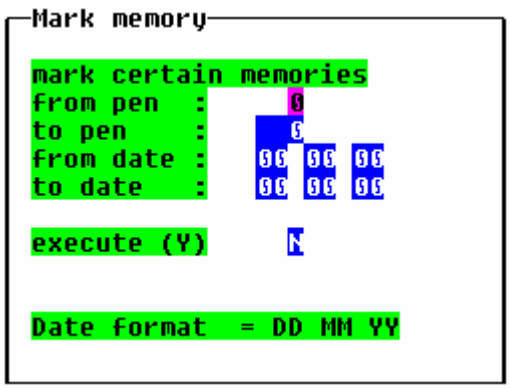
down up — By pressing function key 2 and 4, you can leaf through the memory pages.

selection — By pressing function key 3, the following template is shown:

```
Memory selection
  pen :    0 (0=all)

 pen     -Date-- Memory
   11    18 01 05      1
```

First of all you have to put in the number of feeding point, from which you wish to have an overview. Afterwards all memories, which are occupied with this number of feeding point, are displayed. If you put in "0", all occupied memories are indicated independently of the number of feeding point.
The third possibility is to press function key 3 selection again and select a certain group for evaluation
- either from pen : to pen : or from date : to date :.
Please confirm the chosen group by pressing function key 2 YES:



After having chosen the number of feeding point you can mark the memory *, which you want to use for evaluation. You put the cursor on the desired memory and press function key 3 MARK. If you want to choose all memories, please press function key 2 all.

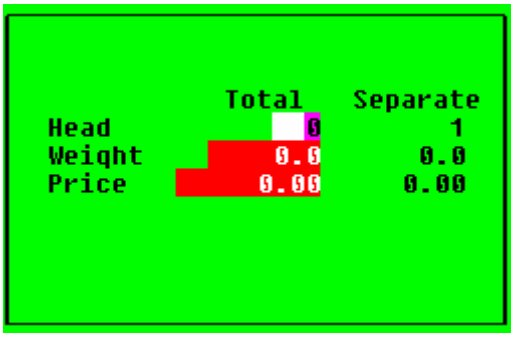
If you want to leave this template, please press ENTER and you will see all data of the chosen memories. If you have chosen more than one memory, an overview of these memories will be made.

Memory Evaluation*:*

First of all put in the following data:

Memory	Put in the number of memory, from which you wish to have an evaluation. (The corresponding numbers of feeding points will automatically be displayed).
Earnin.per kg dead	--> Read "Special Operating Parameter" 63.
Outstabl.weight (kg)	Put in the average outstabling weight of the animals. If you put in the profit per kg alive you have to put in the live weight as well. If you put in the profit per kg dead you have to put in the deadweight of the animals.
Other costs	Here you can put in additional costs.

calculate By pressing function key 3 you can convert the total animal quantity, the total weight and the total price to one animal. After the input of the correct values, please press the ENTER-key and the "Profit per kg alive" and the "Outstabling Weight" are automatically put in.



The following data are calculated and displayed after having put in all inputs:

- Quantity of the instabled animals
- Quantity of the outstabled animals
- Instabling date
- Outstabling date
- Instabling weight
- Average daily increase per animal in kg
- Genetic evaluation (feed utilization) :
  Consumption of dry substance (in kg) per kg of weight increase (kg DS/kg)
  Consumption of the weight increase in percentages per dry substance (%kg/kg DS)
  Energy consumption MJ per kg weight increase (MJ/kg)
  Weight increase in g per energy consumption MJ (g/MJ)
- Animal loss in pieces
- Animal loss in percentages
- Price of pigs (per animal and total)
- Feed costs (per animal and total)
- Profit (per animal and total)
- Profit margin (per animal and total)

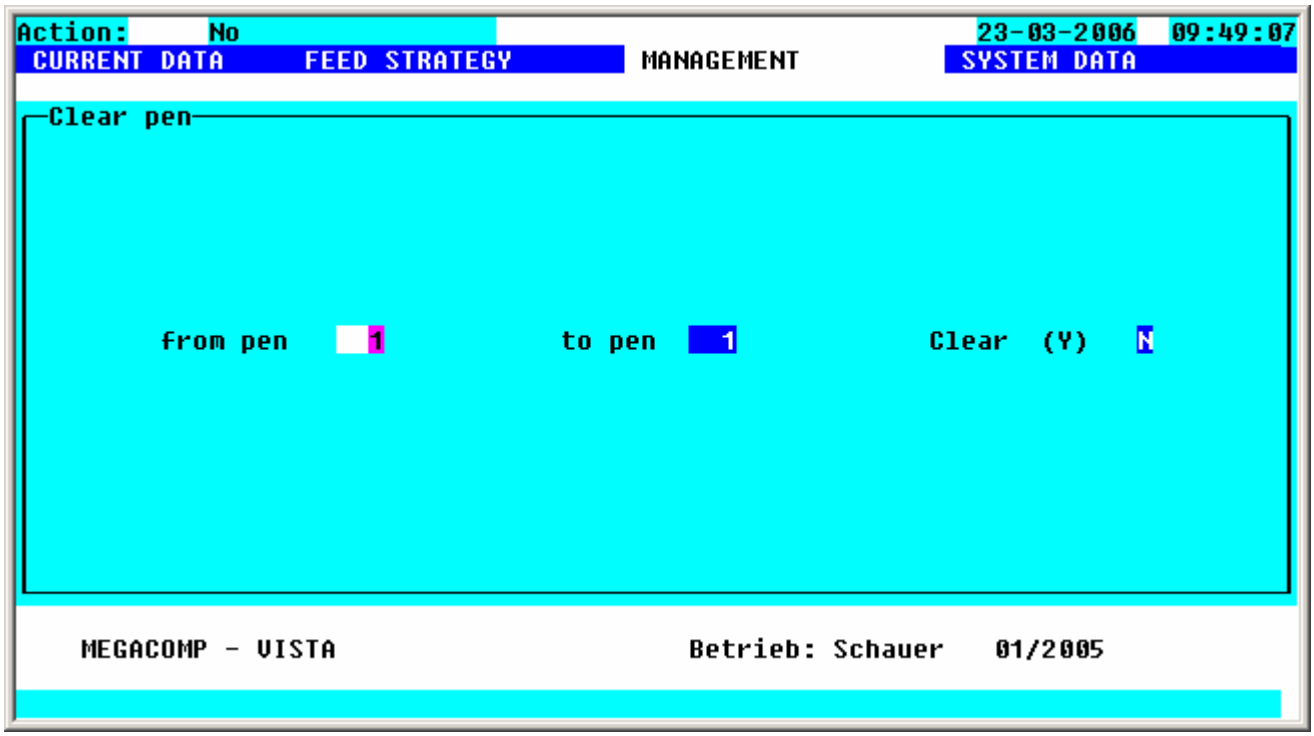
2.6.5 Clear Pens

Due to this program point you can delete feeding points or even certain groups of feeding points. With this function you can delete data of certain feeding points.

Requirements: * You wish to delete all data of a feeding point.

These data will be deleted: Animal weight
Number of animals per feeding point
Quantity per feeding point
Percentages are set to 100
+/- (DAILY ADAPTATION)
Calculation to 1
Recipe number to 1
Number of feed curves to 1
Consumption: DS/ANIMAL
ENERGY/ANIMAL
COSTS/VALVE

Input:



*) If you want to delete only one feeding point:
Please put in the same numbers of feeding points in column from pen and to pen. Afterwards please move the cursor to the right and confirm your input by pressing function key 2 YES.

*) If you want to delete several feeding points:
Please put in the first and the last number of feeding point, which you want to delete. Please confirm your input by pressing function key 2 YES.

2.7 SYSTEM DATA

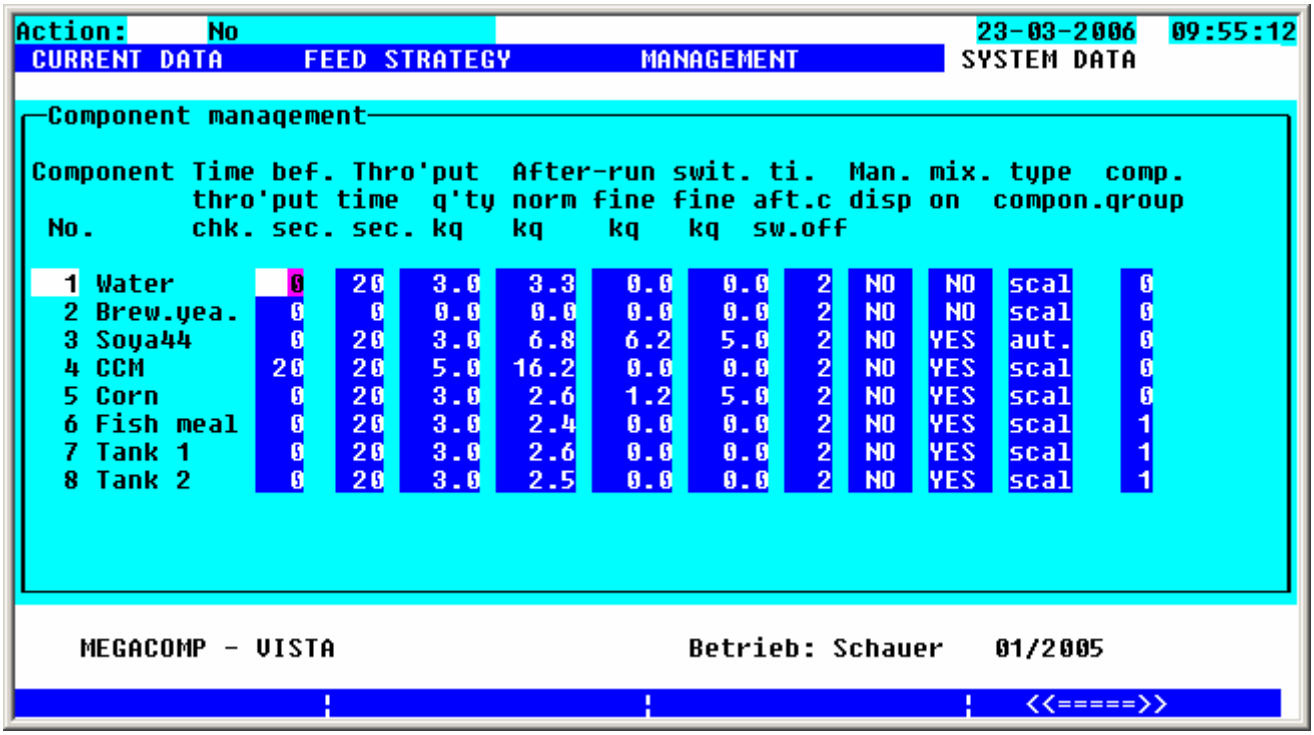
This is the main program for data settings, in order to control the system:

2.7.1 Component Control

Here you can make settings to control the feed components:

Requirements:
* The total quantity of components must be entered in "Special Operating Parameter" 3.
* The order of the components must be set in "Component Data".

Input:



Component No.	Time bef. thro'put chk.	Thro'put time sec.	After-run q'ty sec.	norm kq	fine kq	fine kq	swit. ti. aft.c sw.off	Man. disp	mix. on	type compon.	comp. group
1 Water	0	20	3.0	3.3	0.0	0.0	2	NO	NO	scal	0
2 Brew.yea.	0	0	0.0	0.0	0.0	0.0	2	NO	NO	scal	0
3 Soya44	0	20	3.0	6.8	6.2	5.0	2	NO	YES	aut.	0
4 CCM	20	20	5.0	16.2	0.0	0.0	2	NO	YES	scal	0
5 Corn	0	20	3.0	2.6	1.2	5.0	2	NO	YES	scal	0
6 Fish meal	0	20	3.0	2.4	0.0	0.0	2	NO	YES	scal	1
7 Tank 1	0	20	3.0	2.6	0.0	0.0	2	NO	YES	scal	1
8 Tank 2	0	20	3.0	2.5	0.0	0.0	2	NO	YES	scal	1

Time bef
thro'put
chk. sec

Time before the Throughput Check is carried out: This is the time (in sec.) between the actuation of the components and the throughput check (e.g. it is needed for conveying screws, blowers…)

Thro'put
time
sec.

Throughput Time: You can find out, whether the components feed the entered minimum quantity within this time (in sec.).
Choose this time, so that no damage of the feeder can occur.

Thro'put
q'ty
kq

Throughput Quantity: Here you can put in the minimum quantity (in kg) for each component, which must be fed within the defined throughput time.

If the defined throughput quantity is not reached, the plant switches to a substitute component (only if a substitute component is put in). If no substitute component is entered, an alarm is set off and then the preparation will stop and the malfunction will be displayed on the screen.

After-run
norm fine

After-Run normal - fine: Due to the after-run (in kg) of the components, an additional feed will get into the mixing vat after the switch-off of the feeder unit. This additional quantity is automatically considered by the computer.
The after-run is divided in after-run for standard feeding by scales (normal) and after-run for impulse – fine dosage (fine).

swit.
fine
kq

Switch Quantity to Fine Dosage: Here you can put in the component quantity (in kg). If this quantity is reached, the computer switches to fine dosage (Impulse dosage or frequency converter).
This value must be higher than the value in "After Run - normal". (Standard Setting: 5- 10 times higher than "After Run - normal").

ti.
aft.c
sw.off

Waiting time after the Switch-off of the Components: This is the waiting time (in sec.) between the feeding of one component and the actuation of the next component.

Man.
disp

Manual Dispensation: This means that the automatic correction of the after-run is blocked (for manual feeding of the component).

mix.
on

Mixer on: Here you can decide for each component, whether the mixer in the mixing vat should be actuated. If you only need small quantities of a component, we recommend you not to switch on the mixer, in order to have a more exact dosage.

type
compon

Type Dosage: Here you can put in the type of dosage:
If you use the frequency converter for the feeder control you must set "Scales" in "Type Dosage" for these components. Furthermore you have to put in a switch quantity in "Switch Fine".

scal — The component is weighed.

time — The component quantity is fed, depending on the time (it is used for smallest quantities). You have to put in the throughput time and quantity in "Time Dosage".

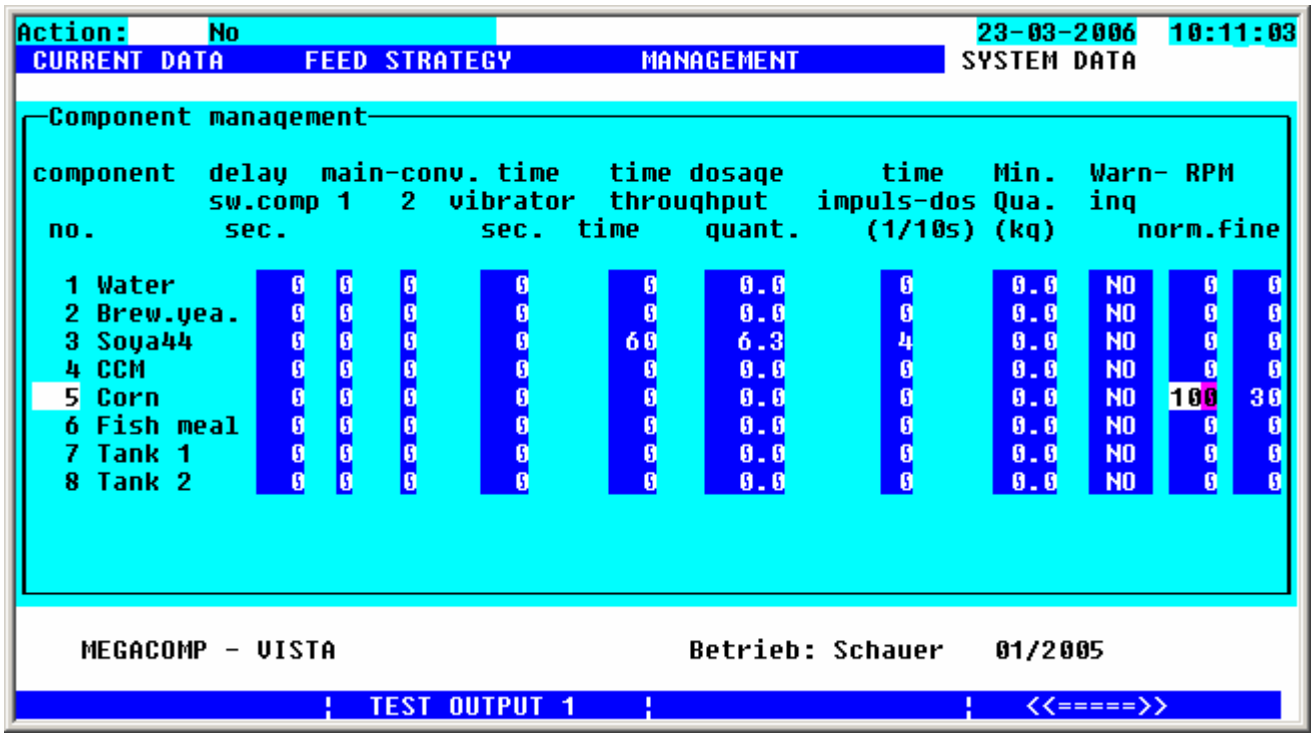
imp. — The component is fed by impulse dosage (it is used for big after-runs). Put in the weight in "Switch fine", which is needed to switch to impulse dosage (this quantity must be higher than "After-Run normal"). Put in the length of the actuation time of the components for impulse dosage in "Time Impulse Dosage". In "Special Operating Parameter" 83 you can define, whether you want to switch to fine dosage when you reach the entered value (Input "0") or when the required component quantity is smaller than this value (Input "1").

aut. — Automatic: The computer decides, whether the preparation of the component is carried out by scales, impulse or time.
Inputs in "Switch Fine" and "Time Dosage" are necessary.
If the component quantity is bigger than in "Switch Fine", the component is prepared by scales.
If the component quantity is smaller or equal than the value in "Switch Fine" and higher or equal than two times "After-Run Fine", the component is prepared by impulse dosage.
If the component quantity is smaller than "Switch Fine" and smaller than two times "After-Run Fine", the component is prepared by time.
Attention: in the case of automatic dosage, you have to set the "Special Operating Parameter" 83 "Impulse Dosage only for Small Quantities" to 1.

comp.
group

Component Group: Components can be separated into groups for the analysis of the residual quantities. If there is too much of a component in the residual quantities before the preparing of a recipe, the unnecessary amount is taken away of a component, which belongs to the same component group.

<<=====>> By pressing function key 4 you can open the second page of the program point "Component Control".



delay sw.comp

Time before the Switch-on of the Component: If you have put in a component flap or a conveyor path - the component is actuated after the flap was opened or after the switch-on of the conveyor path and after this time (in sec.).

main-conv 1 2

Conveyor Path 1 or 2: You can use two conveyor paths (1 or 2) before the component is actuated. Enter the number of the desired conveyor paths in columns 1 or 2.

time vibrator sec.

Turn-on-time of the vibrating unit: You have to set the time (in sec.) how long this vibrating unit should be switched on, if the entered throughput of a component is not reached. After this vibration, the component is actuated again. If the throughput is not reached then the vibrator will start again. If the throughput is still not reached, then the system will change to a substitute component or the preparation will be stopped.

time dosage throughput time quant

Time Dosage: If a component is prepared by the time you have to put in the throughput time (in sec) and throughput quantity (in kg) here. Thus the actuation time of the component can be calculated as per the required quantity.

time impuls-dos

Time Impulse Dosage: This is the actuation time of the components for impulse dosage (in 1/10 sec).

Min.
Qua.

Minimum Quantities: If the quantity, which should be prepared, is smaller than the minimum quantity (in kg) then this component will be left out during the preparation.

Warn-
ing

Warning: By pressing function key 3 change you can determine, if this component should show a warning, when the minimum quantity is not reached or when the component quantity, which should be prepared, is smaller than the after run.

RPM

norm.fine

Rotation Speed normal/fine: If the component is actuated by a frequency converter you can set the value of the analogue signal 1 of the VSA-Mode for normal- and fine dosage here (for the control of the frequency converter). In order to release the dosage by the frequency converter you have to enter “Scales” in “Type Dosage” and you have to set the switch point to fine dosage in “Switch fine”.

Input 100 = 10V output signal (for analogue output 1 of the VSA-Mode): this means that the motor is activated by the maximum set frequency on the frequency converter. (Standard setting: 60 Hz)

Input 0 = 0V output signal (for analogue output 1 of the VSA-Mode): this means that the motor is activated by the minimum set frequency on the frequency converter. (Standard setting: 20 Hz)

Input 1-99 = 0,1V-9,9V output signal (for analogue output 1 of the VSA-Mode): this means that the motor is activated with a frequency, which is set in percentages (between minimum and maximum frequency on the frequency converter).

The following frequencies are shown for the standard frequency range (min. 20Hz, max. 60Hz):

Input	Output signal VSA-Mode	Frequency
0	0 V	20 Hz
10	about 1 V	about 24 Hz
20	about 2 V	about 28 Hz
30	about 3 V	about 32 Hz
40	about 4 V	about 36 Hz
50	about 5 V	about 40 Hz
60	about 6 V	about 44 Hz
70	about 7 V	about 48 Hz
80	about 8 V	about 52 Hz
90	about 9 V	about 56 Hz
100	10 V	60 Hz

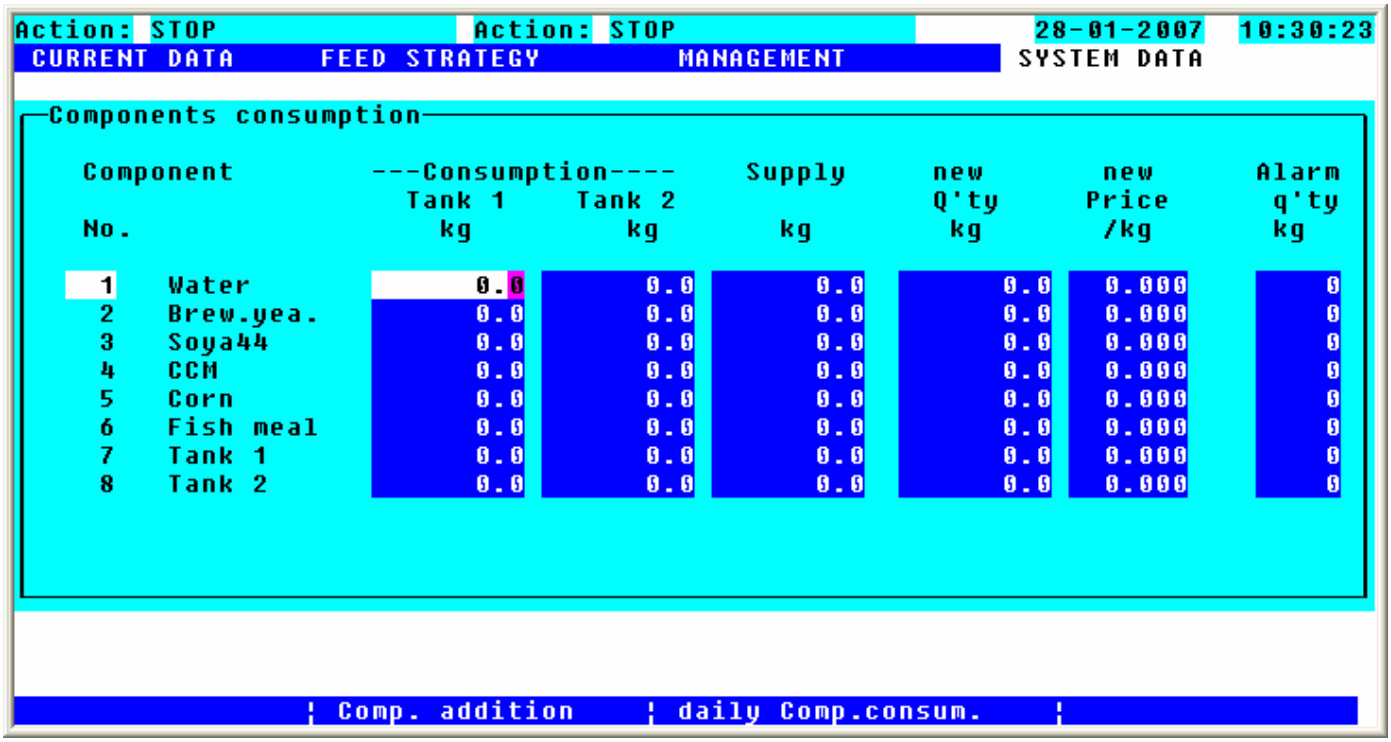
By pressing function key 2 TEST OUTPUT 1, the entered value on analogue output 1 of the VSA-Mode can be shown (for testing).When leaving this template, the analogue value won’t be shown any longer.

2.7.2 Component Consumption

This program point offers an overview of the individual component consumption.

Requirements:
* You have to put in the total number of components in "Special Operating Parameter" 3.
* You have to set the order of the components in “Component Data“.

Input:



This program point saves the consumed quantity of the components, independent of the feeding points. Furthermore, the fill level of the silos can be entered in **Supply**“ (in kg).
During the feeding process the **Supply** is automatically reduced and the **Consumption** (in kg) is increased at the same time. The here shown component consumption is the actual consumption – the after run is considered as well.
These values can be used e.g. for an annual calculation or for the supervision of the silo fill level.

If you want to supervise the silo fill level, you can enter an “alarm” quantity (in kg) in the last column **Alarm q'ty**. If this value is reached, the alarm output (gadget number 2) will automatically be set for the corresponding component. During the filling of the component silo you have to enter the quantity in **new Q'ty** (in kg) and the new price per kg must be entered in **new Price**.

As soon as the “RESERVE” of this component goes back to "0", the **new Q'ty** is automatically taken over in column “RESERVE”. The **new Price** of the component is likewise taken over in "Component Data".

addition of comp. By pressing function key 2 you can enter a supplement of a component. The system calculates an average value of all values of the still existing component quantities and of the values of the supplement.

component No.: **Component Number:** Enter the component in "Component Number", which you want to add. The name of the component is automatically shown.

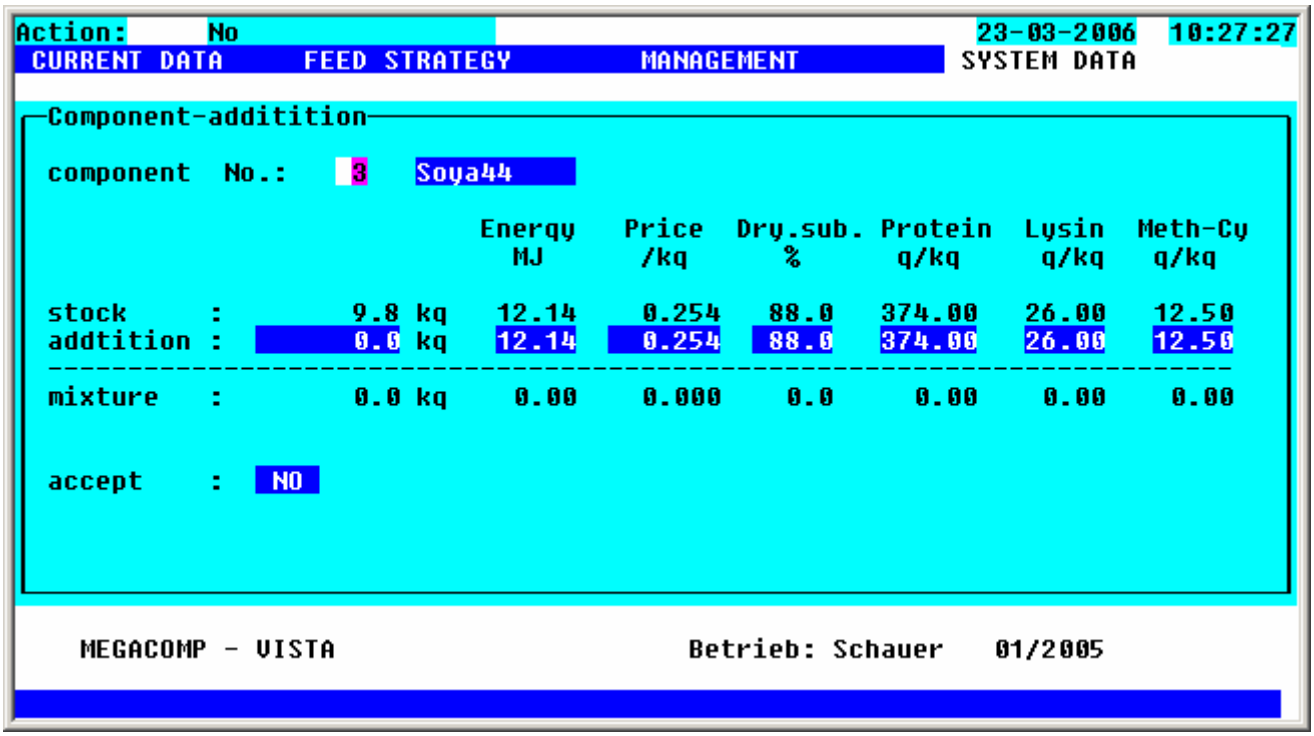
stock : **Reserve:** In "Reserve" you can see the available reserve of a component.

Energy Price Dry.sub. Protein Lysin Meth-Cy Additionally you can see all component data of the component.

addtition : **Supplement:** Set the cursor at "Supplement". Enter the quantity (in kg), which should be mixed up with the available reserve. The desired component data have to be entered as well (at least: Energy and Dry Substance).

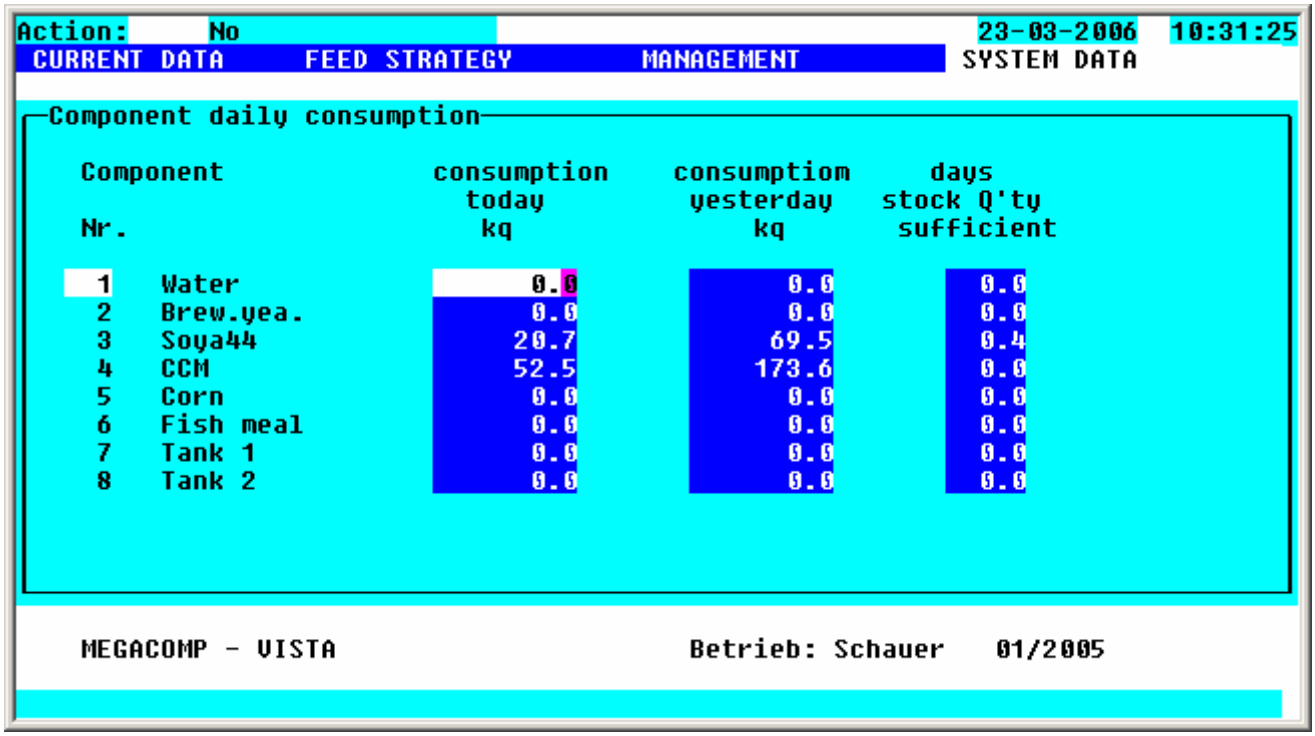
mixture : **Mixture:** In "Mixture", the system automatically calculates the average between the reserve and the supplement.

accept : **Accept:** If you want to take over the changes, confirm your inputs with "Accept" with function key 3 **change** and **YES**. Afterwards leave this mask with the ENTER-key and all data will be taken over.



daily consumpt. comp.

By pressing function key 3 you can see the daily consumptions of the components.



Component

Component: Here you can see the number and name of the component.

consumption today

Consumption today: Here you can see the consumption (in kg) of the consumption of today.

consumptiom yesterday

Consumption yesterday: Here you can see the consumption (in kg) of the consumption of yesterday.

days stock Q'ty sufficient

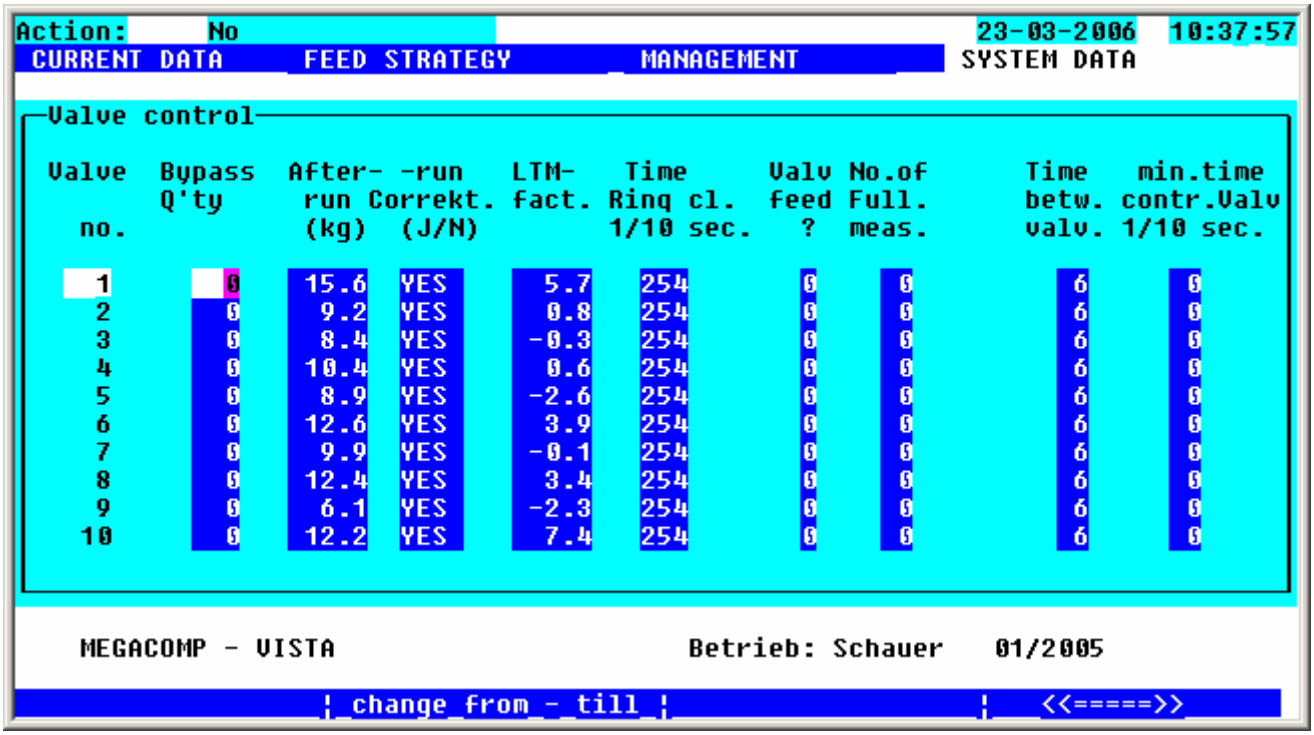
Days Reserve sufficient: If a reserve is entered for a component - it is calculated, how long this reserve is theoretically sufficient.

2.7.3 Valve Control

The settings are used to control the feeding points.

Requirements: * The total quantity of valves must be entered in "Special Operating Parameter" 1.

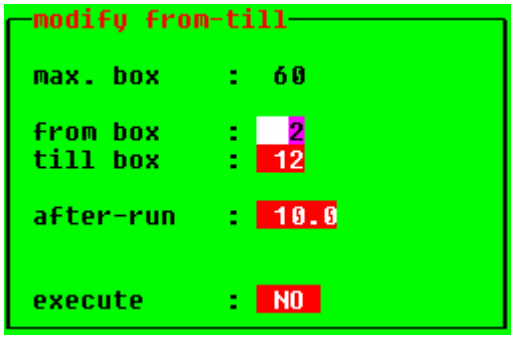
Input:



Valve no.	Bypass Q'ty	After-run (kg)	-run Correkt. (J/N)	LTM-fact.	Time Ring cl. 1/10 sec.	Valv feed ?	No.of Full. meas.	Time betw. valv.	min.time contr.Valv 1/10 sec.
1	0	15.6	YES	5.7	254	0	0	6	0
2	0	9.2	YES	0.8	254	0	0	6	0
3	0	8.4	YES	-0.3	254	0	0	6	0
4	0	10.4	YES	0.6	254	0	0	6	0
5	0	8.9	YES	-2.6	254	0	0	6	0
6	0	12.6	YES	3.9	254	0	0	6	0
7	0	9.9	YES	-0.1	254	0	0	6	0
8	0	12.4	YES	3.4	254	0	0	6	0
9	0	6.1	YES	-2.3	254	0	0	6	0
10	0	12.2	YES	7.4	254	0	0	6	0

from box Press this function key to decide, which feeding point numbers you want to change. The computer changes automatically to the requested line, after having pressed the ENTER- key.

change from - till In every column, where you can see this function key, you can change the inputs **from box** **till box**.
Confirm your inputs with **execute** with function key 3 **change** with **YES** then all data are taken over, when you leave this template with ENTER.
e.g.: After Run:



Bypass Q'ty

Switch quantity Bypass: Exceeding this weight (in kg), it is switched to the Bypass-valve during dispensation. Therefore the feed is dispensed more slowly and it is possible to have a more exact feeding in the case of small quantities. If you put in “0”, the value of “Special Operating Parameter” 11 is automatically used for this feeding point.

After run

After Run: The after run correction for the valves is the same as that for the components. If there is a difference between reference value and actual value, the after run is compensated automatically.
Therefore the dispensed quantity will always be exact during the course of a day.

After- -run Correkt.

Correction: You can switch off the after run correction for any valve in this column with NO. With YES you can activate the after run correction.

LTM- fact.

LTM-Factor: This factor shows the difference to the quantity, which has already been fed. The computer compares the reference quantity, which should be fed and the actual quantity, which was fed – the difference is saved here. This factor is taken into account during the next feeding and the feed quantity, which should be fed, will be corrected.

Time Ring cl.

Time-Ring closed: In this column you can determine for any valve, after which time (in 1/10 sec) and after the actuation of the valve, the ring-return valve opens.

Input number = **0** --> return is always open;
Input number = **255** --> return is always closed; it is used in the case of throughput control by the frequency converter;
Input number = **254** --> return is closed, as soon as the valve is actuated;

Valv feed

Feed Valve ?: there are three possibilities:

0.....Valve is not fed (for Ad-Libitum-Feeding)
1.....Valve is fed (for Ad-Libitum-Feeding)
2.....Valve is always fed (Trough sensors are not read)
3…..Wellness Feeding (read “Daily Program “ in “Wellness-Feeding”)

If "0" or "1" is entered here, the sensors will be checked (if the valves are empty or full) before the preparation. After the sensor-check, it is automatically "1” (if trough is empty) or "0” (if trough is full) entered here.

No.of Full. meas.

Number of “FULL”- messages: This is the number of "Trough is full”- messages of the sensors for Ad-Libitum-Feeding.
If a valve sensor shows an “EMPTY”-message, this value is set back to “0” of the corresponding valve. The maximum of "Trough is full”- messages can be entered in "Special Operating Parameter” 22. If this limit is reached, there is a warning for the corresponding valve shown in the "Malfunction Record”.

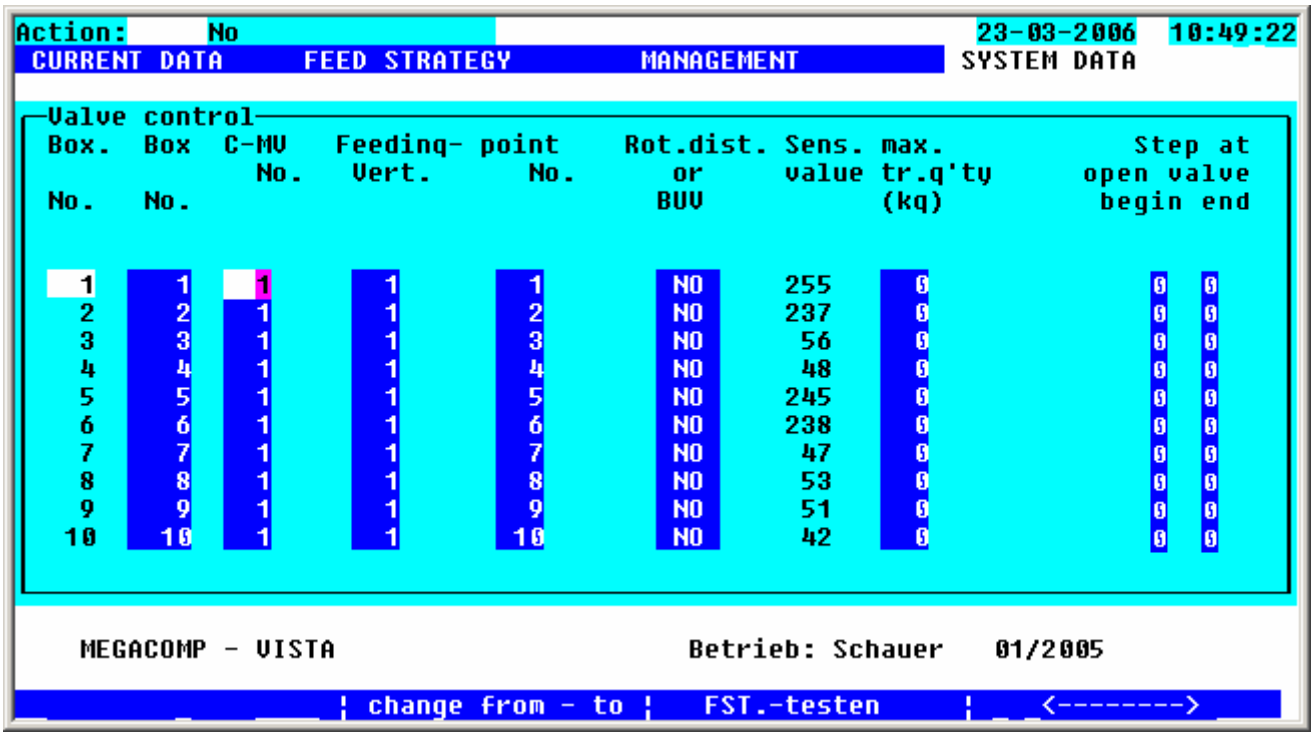
Time betw. valv.

Time between the Valves: This is the time (in sec.) between the end of the feeding of a valve and the next feeding of a valve. The quantity of the after run is calculated for this valve during this time.

min.time contr.Valv

Minimum Time Actuation of Valve: If a valve is fed, it is at least open for this time (in 1/10 sec.). Thus you can avoid, that valves with small quantities are not actuated or only for a short time, or that no quantities are dosed.

<<=====>> Press function key 4, in order to change between the input templates and the valve control.



Action: No 23-03-2006 10:49:22
CURRENT DATA FEED STRATEGY MANAGEMENT SYSTEM DATA

Valve control

Box. No.	Box No.	C-MV No.	Feeding- point Vert.	No.	Rot.dist. or BUV	Sens. value	max. tr.q'ty (kg)	Step at open valve begin	end
1	1	1	1	1	NO	255	0	0	0
2	2	1	1	2	NO	237	0	0	0
3	3	1	1	3	NO	56	0	0	0
4	4	1	1	4	NO	48	0	0	0
5	5	1	1	5	NO	245	0	0	0
6	6	1	1	6	NO	238	0	0	0
7	7	1	1	7	NO	47	0	0	0
8	8	1	1	8	NO	53	0	0	0
9	9	1	1	9	NO	51	0	0	0
10	10	1	1	10	NO	42	0	0	0

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change from - to FST.-testen <-------->

Box. No.

Pen Identification: You can assign a pen identification for every feeding point.
It is only allowed to use every pen identification once.
But several different pens can be assigned to the same feeding point. Thus a separate analysis of the pens is possible.

C-MV No.

C-MV Number: This is the number of the C-MV-Mode, with which this feeding point is connected.
If you press function key 1 FST.-testen you can activate the chosen feeding point.

Feedinq- point Vert.

Feeding Point - Dispenser: This is the number of the feeding point – dispenser, with which this feeding point is connected.
(= Number of the Matrix-dispenser MV100).

Feedinq- point No.

Number of Feeding Point: Put in the valve number, with which the feeding point is connected on the Matrix-dispenser MV100.

Rot.dist. or BUV

Rotational Dispenser-BUS-Valve Yes/No: Standard Setting for MV100 is “No”. Put in “Yes” for every feeding point, which is connected with a rotational dispenser or with a BUS-valve circuit board (=BUV-circuit board).
By pressing function key 1 Test Eingaben you can check, whether the inputs in this column agree with the connected circuit board.

Sens. value

Sensor Value: The read voltage-value of the last sensor test of the trough sensors is shown here.
(Standard sensor value: Air 255, below 20 failures sensor value too small, between 20-220 trough full).
In "Special Operating Parameter" 89 you can put in the value. If you fall below this value, an “EMPTY”-message of the troughs will be shown. In "Special Operating Parameter” 88 you can put in another value. If this value is reached, the trough sensors will show a “short circuit”- message. (Failure: "Sensor Value is too small").

max. tr.q'ty

Max. Trough Quantity: Here you can set a maximum quantity (in kg) per feeding sequence.
If the calculation of the feed quantity equals a higher value, only the here entered maximum quantity is fed.
Normally the max. capacity of the feed trough is entered here.

```
   Step at
open valve
 begin end
```

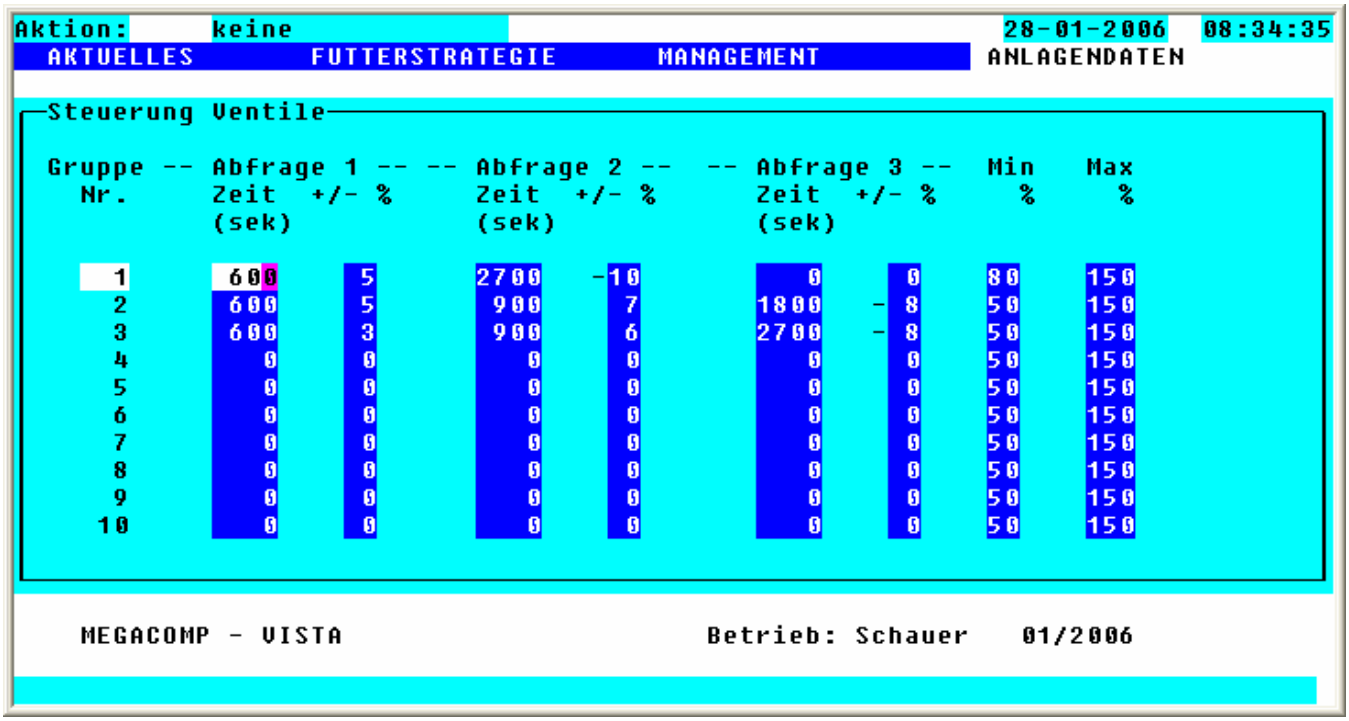
Step for Start-/ Endfrequence: If you use a frequency converter for distribution at throughput regulation, you can insert here start- and endstep of each feeding place for frequency converter (1= lowest frequency, 7= highest frequency).
If you insert for example 2 at the start and 3 at the end, it is nevertheless possible, that you high regulate until step 7, preconditioned fodder amount is big enough, to regulate down the step to switch off.
Via Input of 8 at the start step, the start step is automatically calculated (=highest step possible, that the step to switch off can be regulated down.
If you insert 0 at start step, the value of "Special Operating Parameter" 56 is assumpted.
If you insert 0 at end step, values of "Special Operating Parameter" 95-98 are assumpted.

At standard adjusted frequency area (min. 35 Hz, max. 50 Hz) at VSA-Module – analog output 2 the following signals are displayed:

Input	Outputsignal VSA-Module (Output V2)	Outputfrequence of Frequency Converter
0	0 V	35 Hz
1	~ 1,4 V	~ 37 Hz
2	~ 2,9 V	~ 39 Hz
3	~ 4,3 V	~ 41 Hz
4	~ 5,7 V	~ 43 Hz
5	~ 7,1 V	~ 46 Hz
6	~ 8,5 V	~ 48 Hz
7	10,0 V	50 Hz

Wellness Group

Press function key 3 Wellness Gruppe in column Sensor-gruppe you can insert for each sensor group the query intervals and correction factors for a Wellness-Feeding.



Gruppe Nr.	Abfrage 1 Zeit (sek)	Abfrage 1 +/- %	Abfrage 2 Zeit (sek)	Abfrage 2 +/- %	Abfrage 3 Zeit (sek)	Abfrage 3 +/- %	Min %	Max %
1	600	5	2700	-10	0	0	80	150
2	600	5	900	7	1800	- 8	50	150
3	600	3	900	6	2700	- 8	50	150
4	0	0	0	0	0	0	50	150
5	0	0	0	0	0	0	50	150
6	0	0	0	0	0	0	50	150
7	0	0	0	0	0	0	50	150
8	0	0	0	0	0	0	50	150
9	0	0	0	0	0	0	50	150
10	0	0	0	0	0	0	50	150

Gruppe Nr.

Continuous number of sensor group.

Abfrage 1 Zeit +/- %

Here you can adjust for each sensor group, when the first time after feeding of a feeding place ist trough sensors shall be asked for (in sec.), and with how much percent the feeding curve proportions (under "Stable Allocation") shall be corrected.
If a positive value is inserted and the trough is empty at this query, the feeding curve proportions increase by this correction factor. If a negative value is inserted and the trough is not empty yet at this query, the feeding curve proportions is lessened by this correction factor To insert a negative value, putt he cursor on the field before the percent value and press function key 3 aendern. As soon as the query of condition is finished, to correct the proportions, no more querys fort his feeding curve will be done.
The checkup, if the fodder is too less, shall happen after about 10 minutes, and if the fodder is too much, after about 45 minutes.

Abfrage 2 Zeit +/- % **Abfrage 3 Zeit +/- %**

Input possibility for a second and third query.

Min %

Here you can pinpoint an adminst feeding curve proportion, that means, that there happens no negative correction from this percent value on.

Max %

Here you can pinpoint a maximum feeding curve proportion, that means, that there happens no positive correction from this percent value on.

2.7.4 Consumption per Valve

In this Program point you have to choose among:

```
CONSUM. PER VALVE

1.End
2.Consumption per valve
3.pen groups
4.Ascertain limits
```

2.7.4.1End

If you choose “finish”, the display will jump back to the SYSTEM DATA.

2.7.4.2Consumption per Valve

Here you can see the consumptions of all feeding points.

Requirements: * The total number of feeding points must be entered in "Special Operating Parameter" 1.

Input:

```
Action:      No                                          23-03-2006   10:59:31
 CURRENT DATA     FEED STRATEGY        MANAGEMENT        SYSTEM DATA

Consumption per valve

 Valve        Dry substance      Energy          Costs
              per animal       per animal      per valve
  No.           (in g)

   1             595             7.85            2.76
   2             776            10.24            3.61
   3             621             8.19            2.88
   4             576             7.60            2.68
   5             813            10.73            3.78
   6             598             7.90            2.78
   7             496             6.54            2.30
   8             509             6.71            2.36
   9             346             4.57            1.61
  10             376             4.96            1.75

   MEGACOMP - VISTA                    Betrieb: Schauer    01/2005

                                                          from box no.
```

from box no. Please press function key 4 to determine, which feeding point you want to change. The computer changes automatically to the requested line, after you have pressed the ENTER-key.

Dry substance per animal

Dry Substance per Animal: Here you can see the dry substance per animal on this feeding point (in grams).
If you put in “0” in “Special Operating Parameter” 62, the fed dry substance is shown (dry substance = dry substance recipe * theoretically fed energy / energy of recipe).

If you put in a value for the energy of the standard feed in “Special Operating Parameter” 62, the consumed dry substance is related to this value. (Valve dry substance = theoretically fed energy / energy of standard feed)

If you divide the dry substance per animal by the average weight increase (= selling weight - instabling weight) per animal, you will get the FEED UTILIZATION QUOTA .

Energy per animal

Energy per Animal: For the evaluation of the feed utilization you can see here the fed energy per animal in MJ. (Energy = theoretically fed energy (according to reference value+LTM correction +/- 1 kg)).
As the energy per animal is always added up, the amount is always correct even in the case of losses.

Costs per valve

Costs per Valve: During every feeding, the current price per kg of the feed mix is calculated, then it is multiplied by the actually dispensed quantity and then it is added to the old value.
The total costs per feeding point can be called up at the end of the fattening period. It is therefore easy to calculate the profit :

NUMBER OF THE INSTABLED PIGLETS : ..... PIECE
LOSS: ..... PIECE

SOLD ANIMALS : ..... PIECE

BENEFIT OF THE SOLD ANIMALS : .....
FEED COSTS - .....
PRICE OF THE PIGLETS - .....
GENERAL MACHINERY COSTS - .....

GROSS PROFIT PER FEEDING POINT : .....

==========

DIVIDED BY THE NUMBER OF THE SOLD ANIMALS:

GROSS PROFIT PER ANIMAL : .....

2.7.4.3Pen-Groups

Here you get via selection of the wanted box groups, a lineup of consumption of each component, the total consumption of groups, consumed energy and the price per group:

Suppositions: * The box group limits must be inserted.

Input:

```
Action: no                    Action: no                    28-01-2007   05:17:34
 CURRENT DATA     FEED STRATEGY        MANAGEMENT          SYSTEM DATA

 pen-group consumption

                  pen group:    1

 --Component---   No.    Consumption                        No.f head  Weight
 Water            1  *        0.0          Instabl :          0        0.0
 Corn             2  *        0.0          Loss    :          0        0.0
 CCM              3  *        0.0          current.:          0        0.0
 Barley           4  *        0.0          Av. weight    :            0.0
 Soya44           5  *        0.0          Instabl. date :      00-00-00
 Mineral          6  *        0.0          Fattening days:             0
 Peas             7  *        0.0          Tot. feeding days:          0
 Oats             8  *        0.0

 Sum kernel feed kg           0.0          Kern.feed/f.day :        0.00
 Energy                       0.0          Growth/faten.day:        0.00
 Price                       0.00          (KF/FE)/(GR/FD) :0.00    0.0 %

                   |                   |                   |      clear
```

mark by pressing function key 3 you mark those components (visible by star * behind the component number) which are used for evaluation.

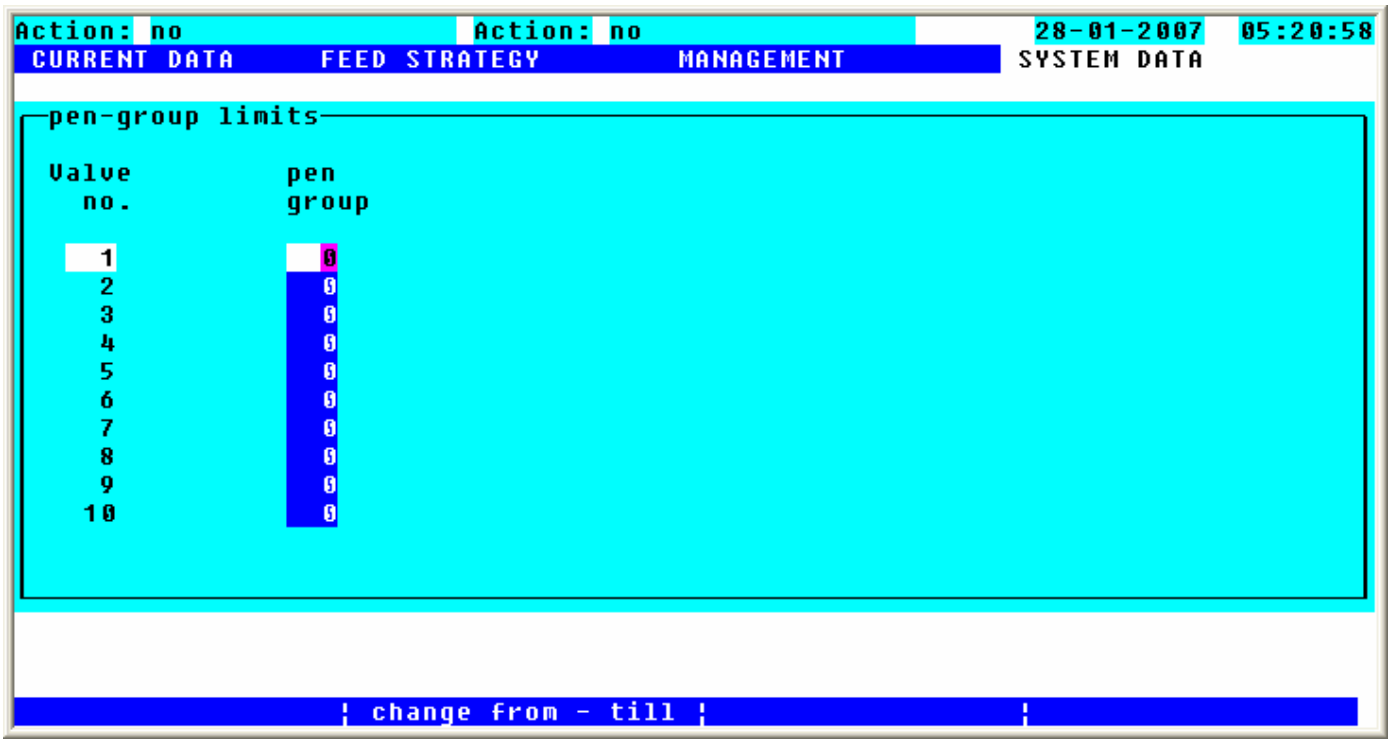
clear after selection of obverse box group, you can delete the data of this group by pressing function key 4; This process is performed after confirm the selection by pressing function key 2 **YES**;

2.7.4.4Ascertain limits

Here you fix the limits of the individual box groups, from which valve to which valve, the box groups reachs; You have to insert at the last fixed box group at „to valve“ the max. number of valves (see special operating parameter 1)

Suppositions: * Total number of valves under "special operating parameter" 1 must be inserted.

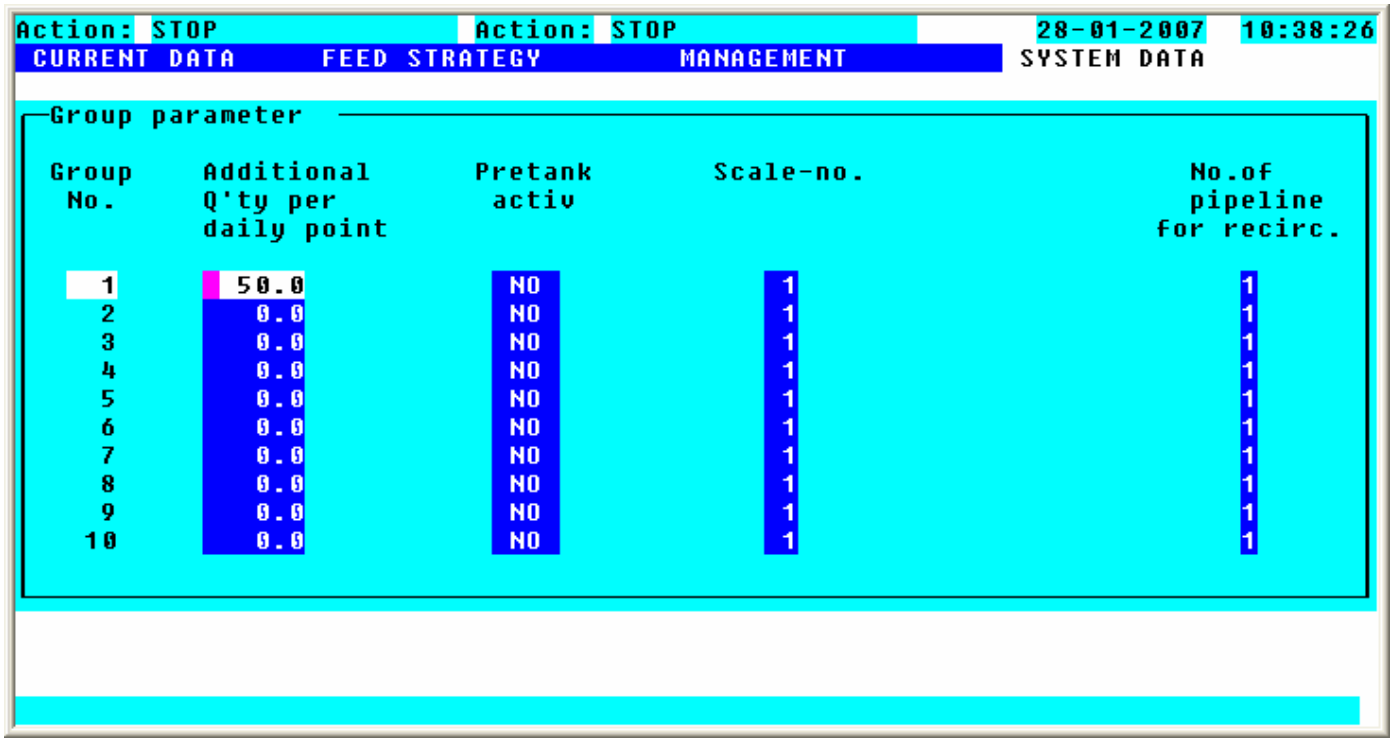
Input:



2.7.5 Group-Parameter

Placements for process the animal groups.

Input:



Additional q'ty per daily point

Additional Quantity per Daily Point: Here you can insert a daily quantity, which should additionally be prepared, for each recipe.

This is necessary to balance the after run difference of many feeding points and on the other hand, additional feed can be prepared for hand valves.

Pretank activ

Preliminary Vat is active: **No** means that no preliminary vat is available
YES means that a preliminary vat is available
By pressing function key 3 **change** you can decide, whether a preliminary vat is available.

Scale-no.

Group signal: A group signal can be assigned to each animal group. Because of that an additional output can be steered during the feeding.

2.7.5.1.1 Option: Coupling with MEGAMIX

No.of pipeline for recirc.

Number Pipe Pump:
Here you determine, which pipe number should be activated during the pumping into the mixing tank of the MEGACOMP).
(Gadget number for "Pump Pipe 1-10" = 291-300)

2.7.6 System Time

Here you can put in the current time, date and even a calendar is included.

End

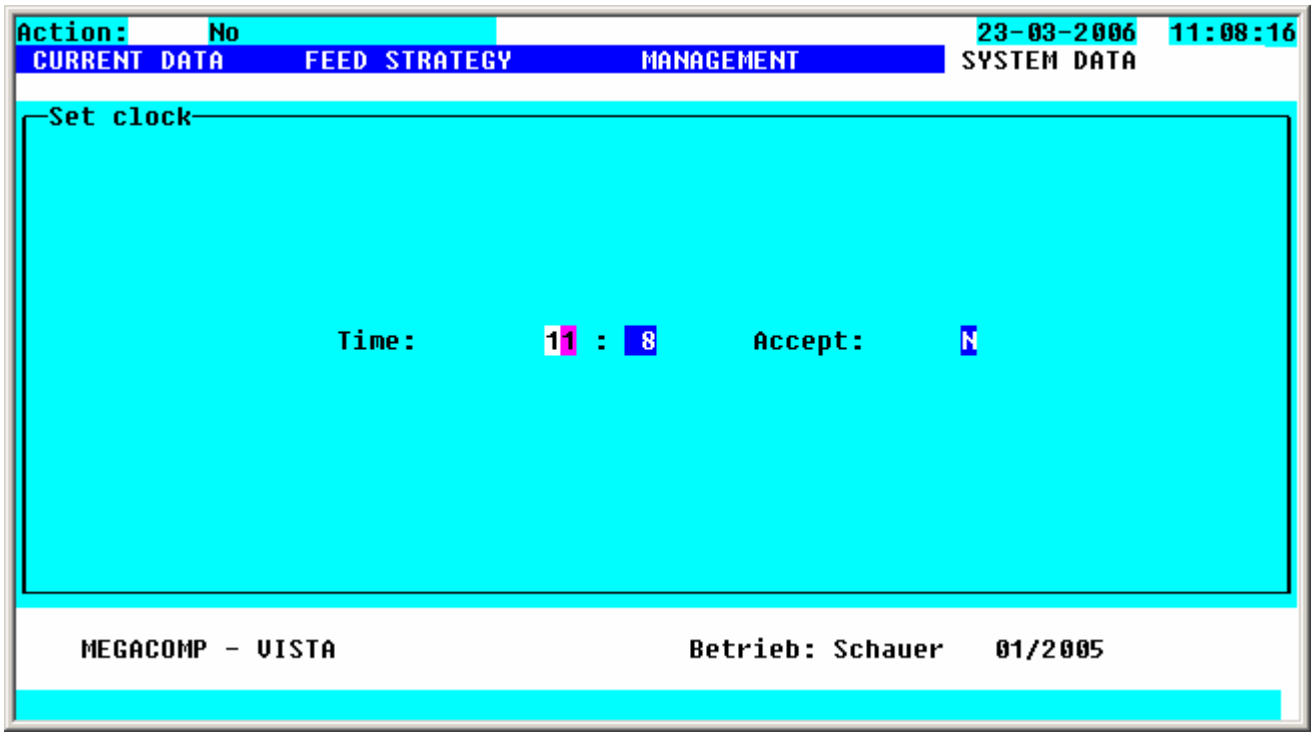
You can leave program “System Time”.

2.7.6.1 Set the Clock

Here you can put in the current time.

Requirements: * This program can only be used, if no activity is active, which means that there must be “No” next to “Action” in the left upper corner of the screen.

Input:

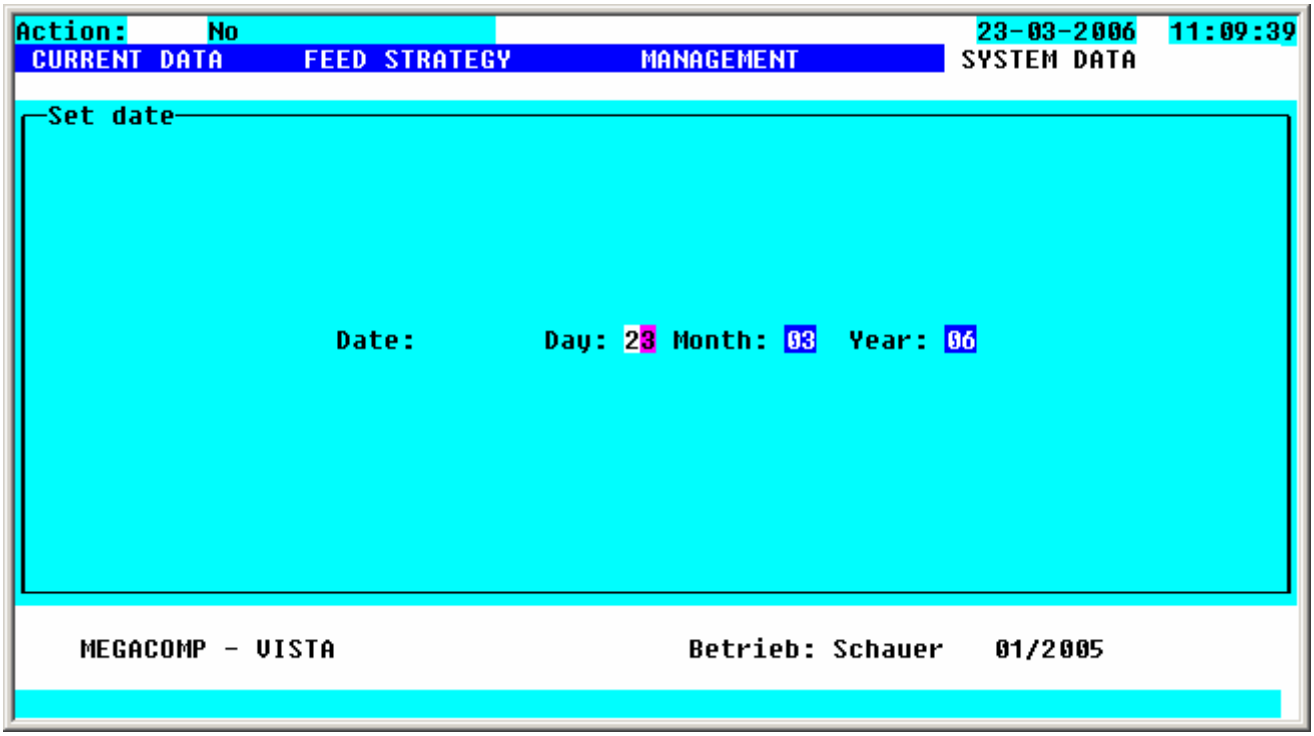


The computer takes over the entered time, e.g.: 13:39, if you press function key 2 YES.
If you want to leave this program, please press the ENTER-key.

2.7.6.2 Set the Date

Here you can put in the current date, e.g.: 27.01.2005

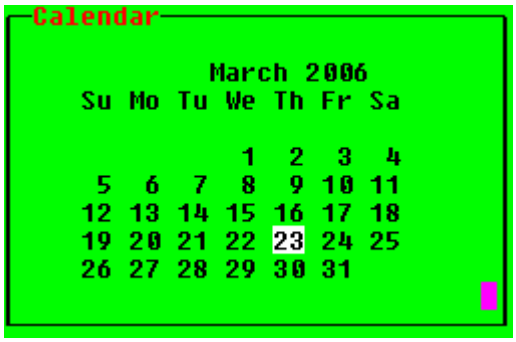
Input:



If you want the computer to take over the entered date, please press the ENTER-key. Then you will automatically get back to “System Data”.

2.7.6.3 Calendar

Overview of the calendar:



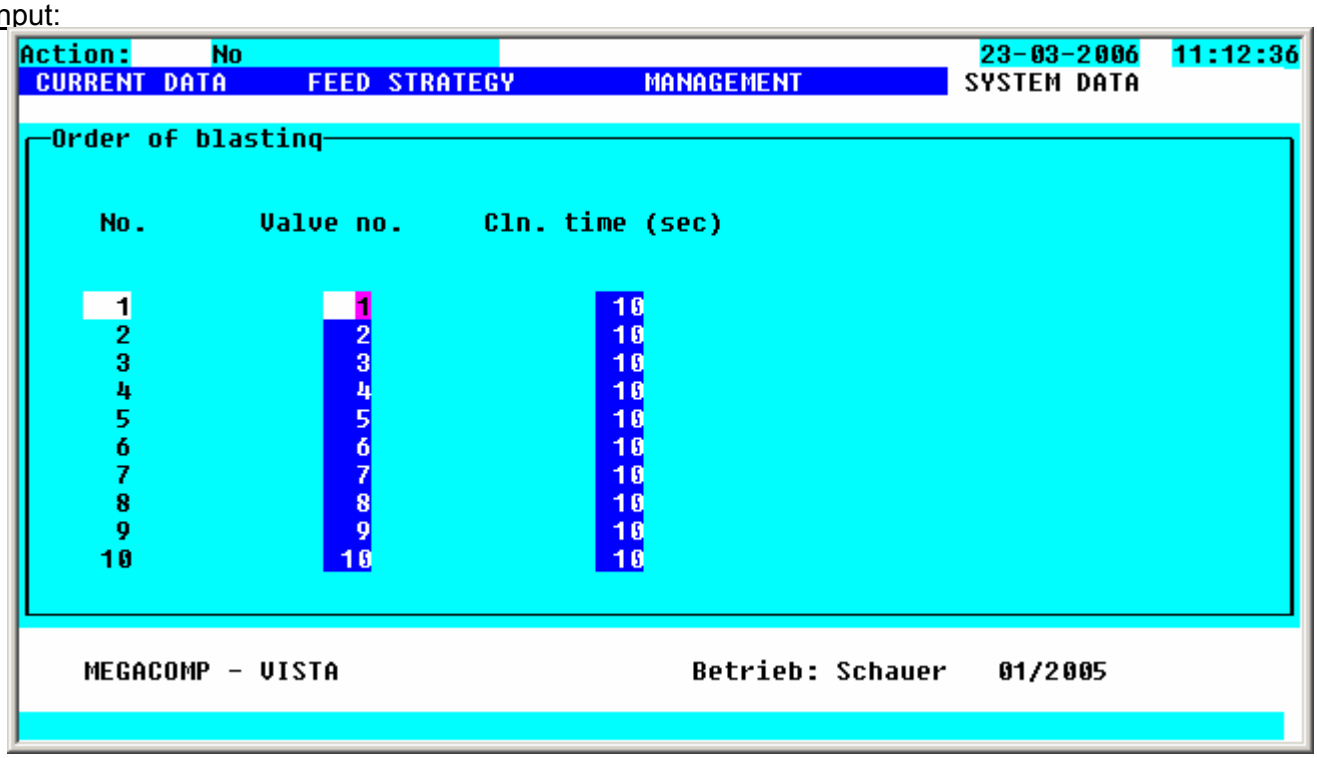
Press function key 2 last month and 3 next month to leaf through the calendar.

2.7.7 Blow Out Sequence

Here you can determine the Blow Out Sequence and Blow Out Times for the feeding points.

Requirements: * The total number of feeding points must be entered in "Special Operating Parameter" 1.

Input:

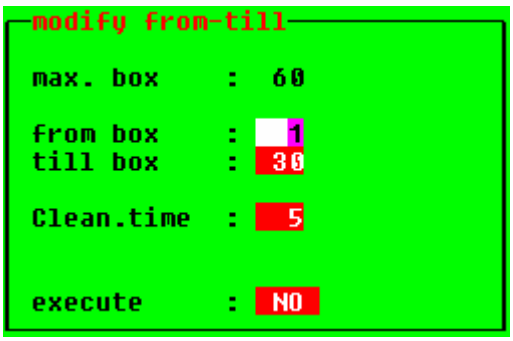


No. — **Number:** Blow out sequence

Valve no. — **Valve Number:** In this column you can change the blow out sequence by entering the feeding point numbers. This is necessary, if the feeding point number does not comply with the sequence, in which the valves are affixed along the ring main.

Cln. time — **Cleaning Time:** Here you can put in the cleaning time (in sec.) for every feeding point.

change from - till In "Cleaning Time" you can put in the same values from a certain box **from box** to a certain box **till box** by pressing function key 2. If you confirm your input in **execute** with function key 3 **change** with **YES**, all data are taken over after having pressed the ENTER-key, when leaving this page.



2.7.8 Times Blow Out

Here you can set the blow out times of the pipe.

Requirements: * The total number of rings must be entered in "Special Operating Parameter" 2.

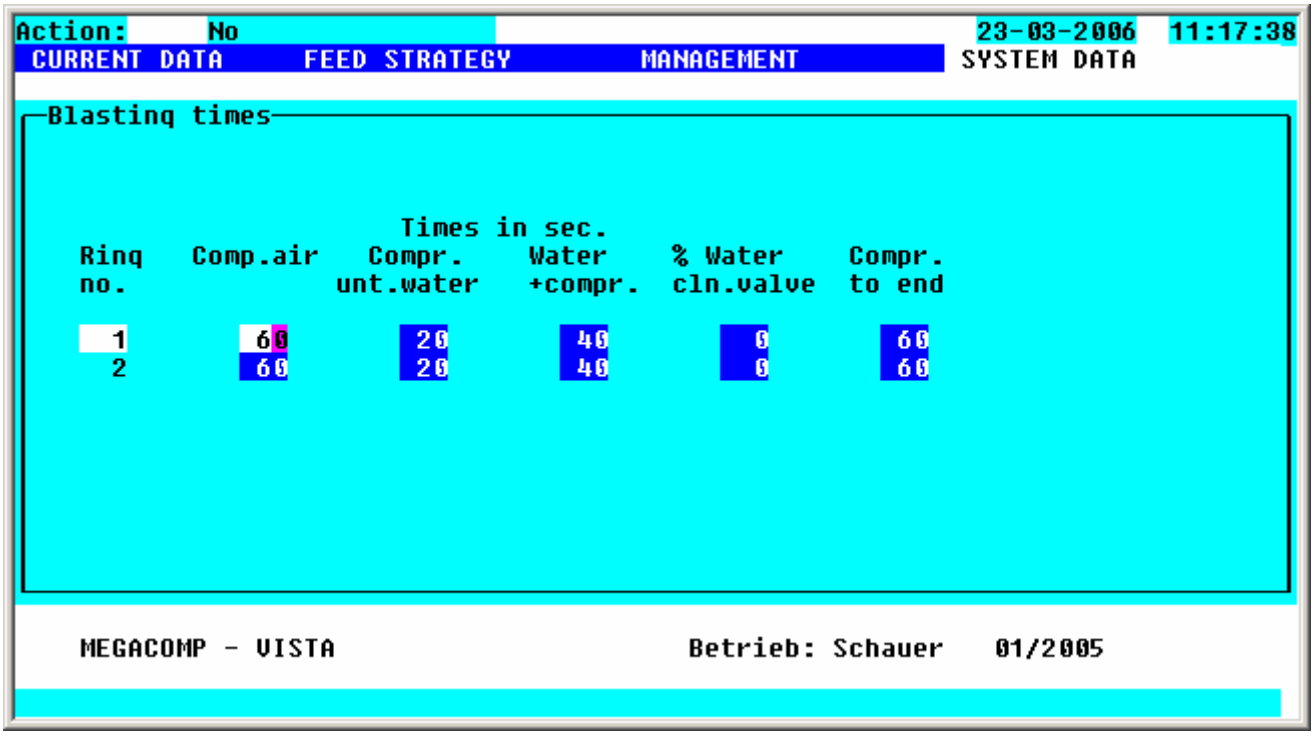
Input:

End

You will get back to the main program "System Data"

2.7.8.1 Times Turbo Clean - Standard

Here you can enter the blow out times of the pipes for a Turbo-Clean-System.



Ring no.

Ring Number

Comp.air

Compressed Air: Activation time (in sec.) compressed air at the beginning of the blow-out;
Standard input: Time until the first air-bubble reaches the mixing tank.

Compr. unt.water

Compressor until Water: This is the time between starting the compressor (blower) and switching on the water valve (in sec.).
Standard input: about 1/3 of the compressed air time (at least 20 sec.)

Water
+compr.

Water + Compressor: Time water supply (in sec.) before the start of the feeding point cleaning.Standard input: Time until no remaining feed can be seen on the transparent pipe of the return. (Better: longer times, in order to achieve a thorough cleaning.)

% Water
cln.valve

% Water during Cleaning of Feeding Points: Time water supply during cleaning of feeding points (input in percent of the total cleaning time of the feeding points). If you put in "0", the feeding point cleaning is automatically blocked in Turbo Clean Standard.
If you use cleaning types 0,1,2,3,4 the cleaning of the feeding points is in "Blow-Out -Standard" automatically blocked as well.

Standard input: mostly 0 sec., as the feeding points are cleaned during the end cleaning. Otherwise about 80% (= long enough, so that enough water is blown out for the last feeding point).

Compr.
to end

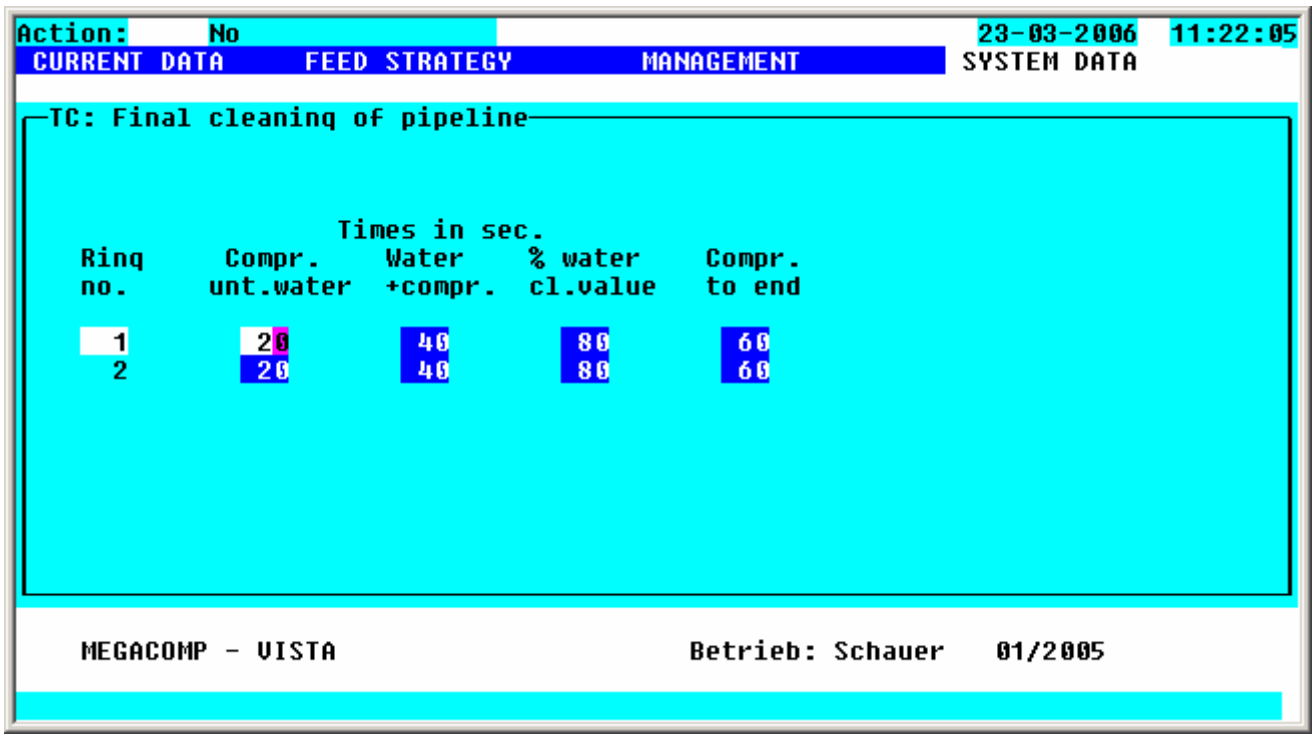
Compressor until End: Actuation time (in sec.) of the compressor (blower) after the cleaning of feeding points.
Standard input: in summer about 30 sec. and in winter about 60 sec.

Sequence of the Standard- Blow Out:

1. Blow out pipes with compressed air
2. Start to blow out the pipes with compressor
3. Waiting time until water supply
4. Water supply until the start of the cleaning of feeding points
5. Clean valves (includes “Time water supply during Cleaning of Feeding Points”)
6. After run of the compressor

2.7.8.2 Times Turbo Clean – End of Feeding

Put in the times for the end cleaning of the pipes, after having finished the feeding of all rings.



HINT	**Possible Types of End Cleaning** → read "Daily Program"

Ring no.

Ring Number

Compr. unt.water

Compressor until Water: This is the time between starting the compressor (blower) and switching on the water valve (in sec.).
Standard input: about 20 sec.

Water +compr.

Water + Compressor: Time water supply (in sec.) before the start of the feeding point cleaning.
Standard input: Time until no remaining feed can be seen on the transparent pipe of the return. (Better: longer times, in order to achieve a thorough cleaning.)

% water cl.value

% Water during Cleaning of Feeding Points: Time water supply during cleaning of feeding points (input in percent of the total cleaning time of the feeding points).
Standard input: about 80% % (= long enough, so that enough water is blown out for the last feeding point).

Compr. to end

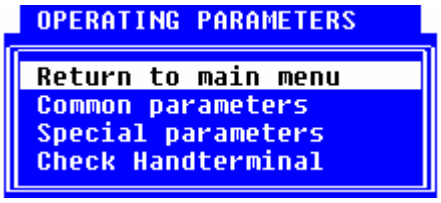
Compressor until End: Actuation time (in sec.) of the compressor (blower) after the cleaning of feeding points.
Standard input: in summer about 30 sec. and in winter about 60 sec.

2.7.9 Operating Parameter

This program point consists of the setting of the plant-specific data.

DANGER Do only make settings under consideration of instructions or after consultation with experts. All software information in this instruction is just examples and has to be adjusted to the demands of your system.
Malfunctions and damage to property can occur when you make wrong inputs.

After having entered this program point you can choose different menus:



End

Choose "End", if you want to leave program point "Operating Parameter".

2.7.9.1 General Operating Parameter

Here you can set the “General Operating Parameters”, which are required to control the plant.
The defaults are values, which are suggested by us for the standard operation. If you want to change a value, please enter the value in “Input”. Only those values, which were changed by you, are displayed in column “Input”. Please enter any changes of the values in your operating instructions. Thus the data can easily be put in later.

General Operating Parameter		
Number	**Default**	**Input**
1 Mixing Time before Preparation (in sec.)	0	.....
2 Mixing Time after Preparation (in sec.)	30	.....
3 Time Mixer off during Soaking Time (in sec.); with Parameters 3 and 4 you can alternately switch on and off the mixer during the soaking time	180	.....
4 Time Mixer on during Soaking Time (in sec.)	60	.....
5 Switch on the mixer after the last component (0 = yes, 1 = no)	0	.....
6 Mixing Time before Dispensation (in sec.)	60	.....

General Operating Parameter Number		Default	Input
7	Mixing Time before the Beginning of Dispensation of any new ring (in sec.)	0	.....
8	Switch off quantity of the mixer during dispensation (in kg); if the amount in the vat falls below the here entered amount during dispensation, the mixer switches off.	0	.....
9	Rinsing Time of Pump before Preparation (in sec.)	0	.....
10	Rinsing Time of Pump before Dispensation (in sec.); (rinsing time for S-pump = 0)	5	.....
11	Rinsing Time during Change of Rings (in sec.)	20	.....
12	Turn on time of the light in the case of Separate Start (in min), after end of feeding	10	.....
13	Cleaning Time during Separate Start (in sec.) → actuation time of the vat cleaning after dispensation.	120	.....
14	Quantity cleaning component (in kg) during Separate Start (read “Parameter 15”). Cleaning for “Automatic” - read "Daily Program" Cleaning Sequence for Separate Start: - The cleaning component is actuated, until the vat quantity is the same as the quantity in “Parameter 14”; - Rinse the pump with the entered cleaning quantity; Please consider, that the here entered quantity should not be bigger, than the quantity of the cleaning component, which is required in the recipe. If the quantity of this component was smaller, the feed would be more liquid by and by.	150	.....
15	Component Number and Cleaning Component The entered cleaning component must also be used in the recipe.	1	.....
16	Switch on and off the light: 0=mixing, 1=dispensation	1	.....
17			
18	For cleaning the vat with fresh water after dispensation (in sec.)	0	.....
19		0	.....
20	Recipe input after dry substance (0 = No, 1 = Yes), also see „Recipes“	0	.....
21	After run of the component flap 1 (in sec.)	30	.....
22	After run of the component flap 2 (in sec.)	30	.....

2General Operating Parameter

Number		Default	Input
23	After run of the actuation of conveyor path 1 during preparation (in sec.) (read "Component Control")	0	.....
24	After run of the actuation of conveyor path 2 during preparation (in sec.)	0	.....
25	Preparation: Determine, before which component you want to activate the waiting time (if entered in the “Daily Program”)	0	.....
26	Delay of switching off the “Rinse the Pump” - signal (in sec.) During this time “Rinse the Ring” is actuated.	0	.....
27	This is the actuation time of the acid fogger (in sec.) after the vat cleaning; The maximum actuation time of the acid fogger is limited with 60 seconds. Please note, that you have to determine, how long an acid fog should be produced during the dosage of acid. Please do this by a timing relay in the control unit of the acid fogger. (Set it to about 20 seconds).	0	.....

DANGER If you use acid foggers please consider the delivered data sheet **“Additional Safety Instructions for the Use of Acid Foggers together with Liquid Feeding Systems”**.

Also at ozone cleaning you have to insert a time, at which the ozone cleaning is started. Set the ozone cleaning time itself at ozone cleaning tool.

28	After run time (in sec.) of component-flap 1 for vat B	30	.....
29	After run time (in sec.) of component-flap 2 for vat B	30	.....
30-50		0	.....

Euro-Conversion Please press function key 4, in order to convert from EURO or to EURO.

input rate 1 Euro = Put in the current exchange rate (to EURO) of your currency.

conversion to Euro By pressing function key 2, you can convert the prices into Euro.

conversion from Euro By pressing function key 3, the prices are converted from Euro to your currency.

commas for price: Put in the required decimal places for the following prices.

Consumption : Put in the decimal places for the total consumptions of the "Pen Evaluation" and "Valve Consumption".

evaluation : Put in the decimal places for the evaluation in "Instabling" and "Pen Evaluation”.

components : Put in the decimal places for the component prices in "Component Data" and "Component Consumption".

recipes : Put in the decimal places for the recipe in "Recipes".

2.7.9.2Special Operating Parameter

Here you can set the Special Operating Parameters, which are required to control the complete plant:

In order to enter this program, please put in the CODE (=the minutes, which are currently displayed).

The defaults are values, which are suggested by us for the standard operation. If you want to change a value, then you enter this value in “Input”. Only those values, which were changed, are displayed in column “Input”. Please enter any changes of the values in your operating instructions. Thus the data can easily be put in later.

Special Operating Parameter Number	Default	Input
1 Total number of feeding points	60	.....
2 Total number of the feed line rings	5	.....
3 Total number of components	8	.....
4 Scales Type: 600 = C-MV-Mode on CONTROL	600	.....
5 Max. vat contents (in kg)	2200	.....
6 The maximum after run (in kg) of the components is indicated here. In the case of exceeding this value – this malfunction is displayed: "After Run is too big".	40	.....
7 The maximum overflow (in kg) of the components is indicated here. In the case of exceeding this value– this malfunction is displayed: "Overflow".	35	.....
8 The maximum after run (in kg) during dispensation is indicated here. In the case of exceeding this value – this malfunction is displayed: "After Run is too big".	35	.....
9 Warning quantity of the vat: If the vat quantity changes within 10 seconds by more than the here entered quantity (in kg), then the computer shows malfunction “Leak”.	100	.....
10 Control time – turning off the components (in sec.). If the scales values change by less than 1 kg within the here entered time after turning off the components, then the after run correction is carried out and the next activity is started.	3	.....
11 Switch Quantity Bypass (in kg), if this weight is reached during dispensation, it is switched to the Bypass valve. This Parameter is only active for feeding points, for which no switch quantity for Bypass was entered in “Valve Control”.	30	.....
12 Dispensation as per reference value (0 = No , 1 = Yes)	0	.....

Special Operating Parameter

Number		Default	Input
13		0	.....
14	Waiting time for air reversing valve to higher system pressure (in sec.)	0	.....
15			
16		0	.....
17	Maximum number of feeding place valves, which may be blocked at feeding each other, without setting the computer to malfunction ">3 valves block.".	3	.....
18		0	.....
19		0	.....
20		0	.....
21	Minimum quantity (in kg) of required feed, of all valves, in order to be in a position to carry out an Ad-Libitum Feeding.	0	.....
22	Max. number of messages "Trough is full" of the sensors, until the warning “Trough is never empty” is shown in "Malfunction Record". (Read "Valve Control")	5	.....
23	Minimum quantity (in kg) during blow out with compressed air; If less quantity returns during the blow out of the pipe with compressed air, the computer indicates the failure "Blocked".	0	.....
24	This is the time, which is used for blowing out the ring-pump (in sec.) (Is not used at the moment!)	0	.....
25	After Run Pump (in sec.)	5	.....
26	Cleaning before the blow out. If you set this Parameter to "0", the mixing vat is cleaned, before the last ring line is blown out. Additional function: Lower Limit Empty Quantity in the preliminary vat (in kg);	10	.....
27	Throughput Time Empty Preliminary Vat (in sec.)	15	.....
28	Throughput Quantity Empty Preliminary vat (in kg)	3	.....
29	Time for rinsing the preliminary vat (in sec.) before emptying	0	.....
30	Warning Quantity "Blow Out" the pipe (kg): If less quantity returns during the blow out of the pipe, than the pipe content minus the entered "Warning Quantity”, the computer indicates the failure “Blocked”.	100	.....

Special Operating Parameter Number	Default	Input
31 Fill Warning Quantity Pipe: If more quantity is pumped into the pipe, as the pipe content plus the entered warning quantity during filling of the pipe, the computer indicates the message “Leak”. During emptying the preliminary-vat, at least the pipe content minus this warning quantity must be put in.	100	.....
32-43	0	.....
44 Switch off mixer after preparation (1= J; 0=N)	0	.....
45-48	0	.....
49 Steps for fine dosage by frequency converter (in kg)	5	.....
50 Rinsing time of line between 2 valves (1/10 sec.) (is not used at the moment!)	50	.....
51 Minimum quantity of the last step for fine dosage by frequency converter (in kg)	10	.....
52 Waiting time after full throughput - until the minimum throughput is activated (in 1/10 sec.) e.g. after “Rinse Ring”	50	.....
53 Waiting time after minimum throughput – until the valve is activated (in 1/10 sec.)	20	.....
54 Time (in sec.) for thorough check for fine dosage. Within this time the quantity of Parameter 55 must be dosed, otherwise it is switched to the next higher step.	50	.....
55 Quantity (in kg) for throughput check for fine dosage. (Read “Parameter 54”)	10	.....
56 First step at the beginning of feeding the valve	2	.....
57 If the rotational speed steps are different (switch off step of previous valve and switch on step of current valve), for each step any time to wait, that the pressure relations in the line stabilises again (in 1/10 sec.).	20	.....
58 Rotational speed step of pump for vat cleaning	4	.....
59 Calculation with residual quantity analysis (1=yes, 0=no) No = Residual quantity refers to the current recipe, which should be prepared; Yes = Residual quantity refers to the last recipe, which was fed. This is only possible, when all recipes consist of the same components and when the component proportions of the residual quantity are used at least for the next recipe.	0	.....
60 Correction of LTM factor (1=yes, 0=no) (→ read "Valve Control")	1	.....

Special Operating Parameter

Number		Default	Input
61	Standardization of recipe: 0=without; otherwise in percentages. The energy and constituents of the feed of the recipe can be referred to the here entered percentage value of the suggested dry substance.	88	.....
62	Energy of Standard Feed (MJ/kg*100) This input determines the type of calculation of the dry substance consumption/animal. Input "0": the consumption of dry substance is calculated as per the fed quantity and as per the dry substance of the recipe; Input "Standard Value": (z.B.:1320). The dry substance consumption is calculated by dividing the fed energy by the energy contents of one kilogram of standard feed. The dry substance consumption is, therefore the theoretical consumption of standard feed.	1320	.....
63	Conversion factor of live- and deadweight per thousand. This value is considered in “Pen Evaluation”: Input "1000": proceeds and outstabling weight refer to live weight; Input "smaller 1000": proceeds and outstabling weight refer to the deadweight; This factor is used for the calculation of the live weight: (deadweight/factor) x 1000 = live weight (daily increase – feed utilization)	800	.....
64	Calculation of the increase in weight (in percent) 0= no, 1= CAL1, 2= CAL2 and 3= both; Here you can determine whether the increase in weight should be calculated only as per the days or if the fed quantity in percentages should also be taken into account.	0	.....
65	Sensor Test: Lower limit (read "Valve Control" in "Sensor Value")	20	.....
66	Sensor Test: Upper limit (read "Valve Control" in "Sensor Value")	220	.....
67	Language on the C-MV-Controller 0 = German 1 = Danish 2 = English 3 = Dutch 4 = Italian 5 = Czech 6 = Slovak 7 = Polish 8 = Spanish 9 = Russian 10 = Hungarian 11 = Slovenian 12 = Croatian	0	.....
68	Computer-number for data transfer	1	.....
69	Identification Printer: 0 locked 4 Centronics 5 Print by PC	0	.....
70	Online-Transmission is active (0=no, 1=yes, is automatically set for PC-coupling).	0	.....

Special Operating Parameter Number		Default	Input
71	Number of lines per page for printer	65	.....
72	Debug-display (0=no, 1=yes, 2=all, only for test purposes)	0	.....
73	Parity of PC-interface (1 = even, 0 = no);	1	.....
74	Baud rate PC-interface	19200	.....
75	It takes the here entered time, until the screen is del. (in min.); if no key is pressed.	10	.....
76	Screen – Mode for Low-Current (Screen Saver); 0 = No → ! for LCD-screen only "0" 1 = Mode for low-current is only possible, if no action is active or if it is set to STOP; 2 = Mode for low-current is always possible;	0	.....
77	Modem is active (1 = yes, 0 = no)	0	.....
78-82		0	.....
83	Feeding curve after content amount: 0 = Protein, 1 = Lysine Here you select, if feeding curve in Energy + Protein or Energy + Lysine is defined;	0	.....
84	Input at feeding curve after 0 = Percent 1 = Content Amount	0	.....
85	Limit value for amount calculation (in kg): At Genpro - In Out not active!	0	.....
86	Number of C-EA controllers: how many C-EA-hand manuals are connected?	1	.....
87	Number of C-MV controllers: how many C-MV-Modes are connected?	1	.....
88		0	.....
89	Distribute until amount is less than..(in kg); If the amount in vat at distribution of simultan plant gets less than this value, it shifts automatically to the next vat.	50	.....
90	Impulse dosage – only for small quantities: 0 = If the entered value in “Component Control” – “Switch Fine” is reached, it is switched to impulse dosage. 1 = Impulse dosage is only used for components, whose quantity is smaller than the entered value in "Component Control" - "Switch Fine".	0	.....

Special Operating Parameter Number	Default	Input
91	0	.....
92 Protocol pressure (99=all, only for test purposes)	0	.....
93-94		
Parameter 95-98 only optional at dosage via frequency converter 95 Minimum switch off step at dosage amount > 5 kg The Parameter 95-98 gets active, when "0" is inserted for the obversely valve in menu "Valve Control“ in column "Step For Endfrequency". The switch off step is fixed dependent on feeded valve amount over those parameter.	0	.....
96 Minimum switch off step at dosage amount > 10 kg (see Par. 95)	0	.....
97 Minimum switch off step at dosage amount > 15 kg (see Par. 95)	0	.....
98 Minimum switch off step at dosage amount > 20 kg (see Par. 95)	0	.....
99	0	.....
100 Register the system message for C-MV, C-EA, etc. in the “Malfunction Record”. (0=no, 1=yes)	0	.....

2.7.9.2.1 Option: Parameter of MEGACOMP for MEGAMIX-Plant

By pressing function key 1 in "Special Operating Parameter" you can enter the program Megamix parameters. Here you can carry out settings of the coupling of MEGAMIX-MEGACOMP.

MEGACOMP-MEGAMIX Operating Parameter		
Number	**Default**	**Input**
1 Computer number MEGACOMP for MEGAMIX-coupling	1	.....
2 Warning quantity (in kg) during pumping of MEGAMIX. The MEGACOMP waits until the expected command quantity minus this warning quantity is pumped by the MEGAMIX. If this quantity is reached, Parameter 17 and 18 control whether more feed comes in.	5	.....
3 This is the difference of target- and actual quantity (in kg) after the last pumping between Megamix and Megacomp. This value is automatically entered.	0	.....
4 This is the expected cleaning quantity (in kg). It is automatically entered in "Bring Forward the Preparation".	0	.....
5 Bring forward the preparation (0= no, 1 = yes); The Megamix already demands the quantity for the next preparation, during the Dispensation (in the case of "Bring Forward the Preparation". → Read "Daily Program".	1	.....
6 This is the expected residual quantity (in kg) during dispensation. (= Additional quantity + difference after pumping + pipe contents of the last ring, which should be fed). It is automatically entered in "Bring Forward the Preparation".	0	.....
7 to 16	0	.....
17 This is the time for the throughput check during pumping (in sec.), after having reached the target quantity minus warning quantity of Parameter 2. Within this time it is checked, whether at least the quantity of Parameter 18 is pumped. If this throughput is not reached or if the target quantity is reached, the MEGACOMP stops pumping. Component 2 is switched off on the MEGACOMP (even if still a quantity comes) and a confirmation is sent to the MEGAMIX (informing that the pumping is stopped), depending on Parameter 19.	15	.....
18 This is the quantity for the throughput check during pumping (in kg). Read Parameter 17.	3	.....
19 Confirmation, informing that the pumping is finished: 0 = No, MEGAMIX does not wait for a confirmation of the MEGACOMP; 1 = Yes, MEGAMIX waits for a confirmation of the MEGACOMP;	1	.....
20	0	.....

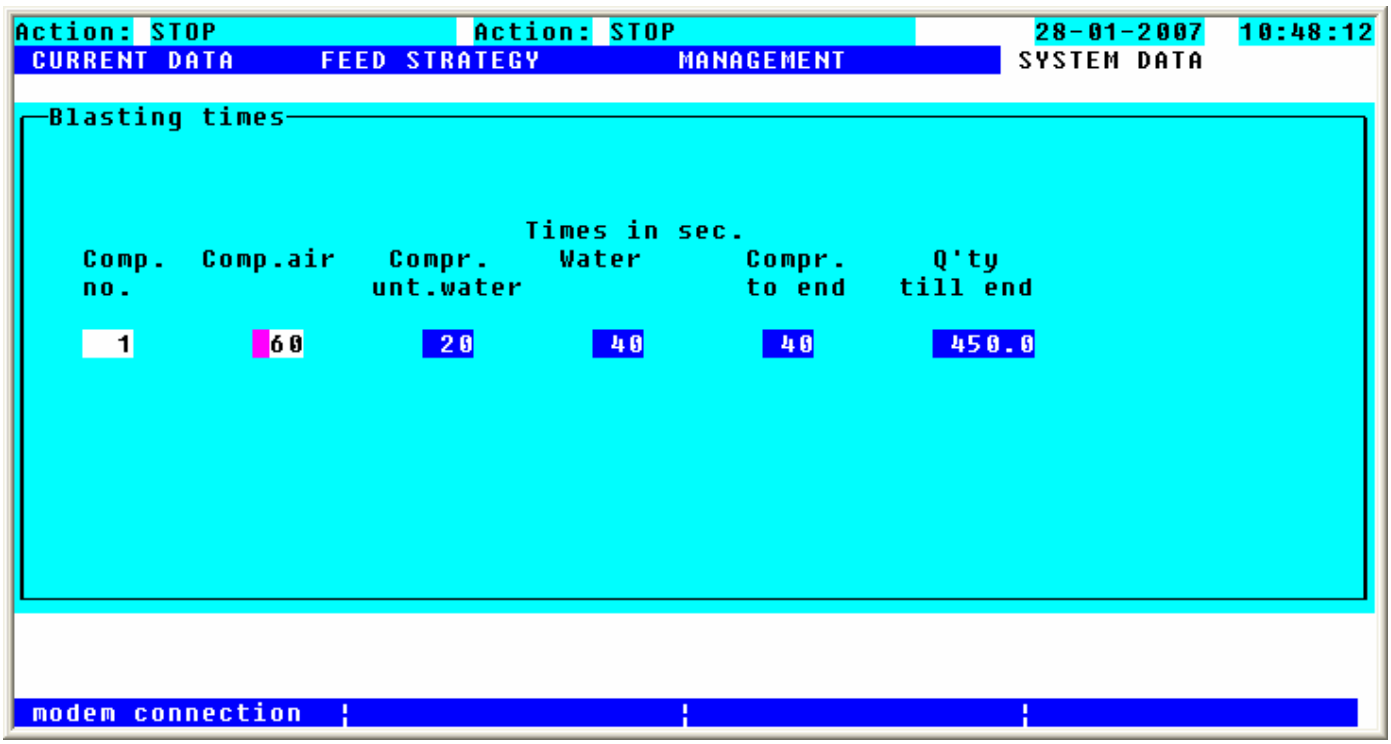
By pressing function key 1 modem connection, you can carry out setting for a modem connection → read "PC-Program" - Option: "MODE CONTROL".

2.7.9.2.2 Option: Parameter of MEGAMIX for MEGAMIX-Plant

By pressing function key 1 in "Special Operating Parameter" you can enter the program Megamix parameters. Here you can carry out settings of the coupling of MEGAMIX-MEGACOMP.

MEGAMIX Operating Parameter		
Number	**Default**	**Input**
1 Number of the connected MEGACOMP	1	.....
2 After Run Pump; after reaching Parameter 3 (in sec.)	5	.....
3 Lower Limit Empty Quantity during Pumping (in kg)	10	.....
4 Throughput time during pumping (in sec.). During this time the quantity of Parameter 5 must be pumped.	15	.....
5 Throughput quantity during pumping (in kg) (read Parameter 4)	3	.....
6 Cleaning time for MEGAMIX (in sec.); after pumping	0	.....
7 This is the max. scales difference between Megacomp and Megamix (in kg)	100	.....
8 This is the time, when the mixer is switched on during the waiting time until the pumping starts. The mixer can be switched on and off during the time of Parameter 8 and 9;	10	.....
9 This is the time, when the mixer is switched off, during the waiting time until the pumping starts.	10	.....
10 This is the warning quantity (in kg) between the current preparation and the preparation, which was brought forward. A MEGACOMP can already send new quantity requirements to the MEGAMIX during dispensation. At the end of dispensation, the MEGACOMP demands the required quantity of MEGAMIX again. This quantity can be different of the previous demanded quantity e.g. due to the residual quantity. If the new demanded quantity is within this warning quantity, the possible additional quantity won't be prepared.	50	.....
11-16	0	.....
17 This is the additional quantity, if there is too much residual quantity (0=no, 1=yes)	0	.....
18-20	0	.....

By pressing function key 1 “**Times Blow out Megamix”** Megamix blast.time, in program "MEGAMIX Operating Parameter", you can put in the blow-out times for the pipes between the MEGAMIX and MEGACOMP.



Comp. no.

MEGACOMP: These are the times for the blow out for the line to the entered MEGACOMP.

Comp.air

Compressed Air: This is the actuation time of the compressed air at the beginning of the blow out (in sec.);
Standard input: The time, until the first bleb in the pipe reaches the mixing vat.

Compr. unt.water

Compressor until Water: This is the time between starting the compressor (blower) and switching on the water valve (in sec.).
Standard input: about 1/3 of the compressed air-time (but at least 20 sec.)

Water

Water: Time water supply for pipe cleaning (in sec.)
Standard input: Time until no remaining feed can be seen on the transparent pipe of the return. (Better: longer times, in order to achieve a thorough cleaning.)

Compr. to end

Compressor until End: Actuation time (in sec.) of the compressor (blower) after the cleaning of feeding points.
Standard input: in summer about 30 sec. and in winter about 60 sec.

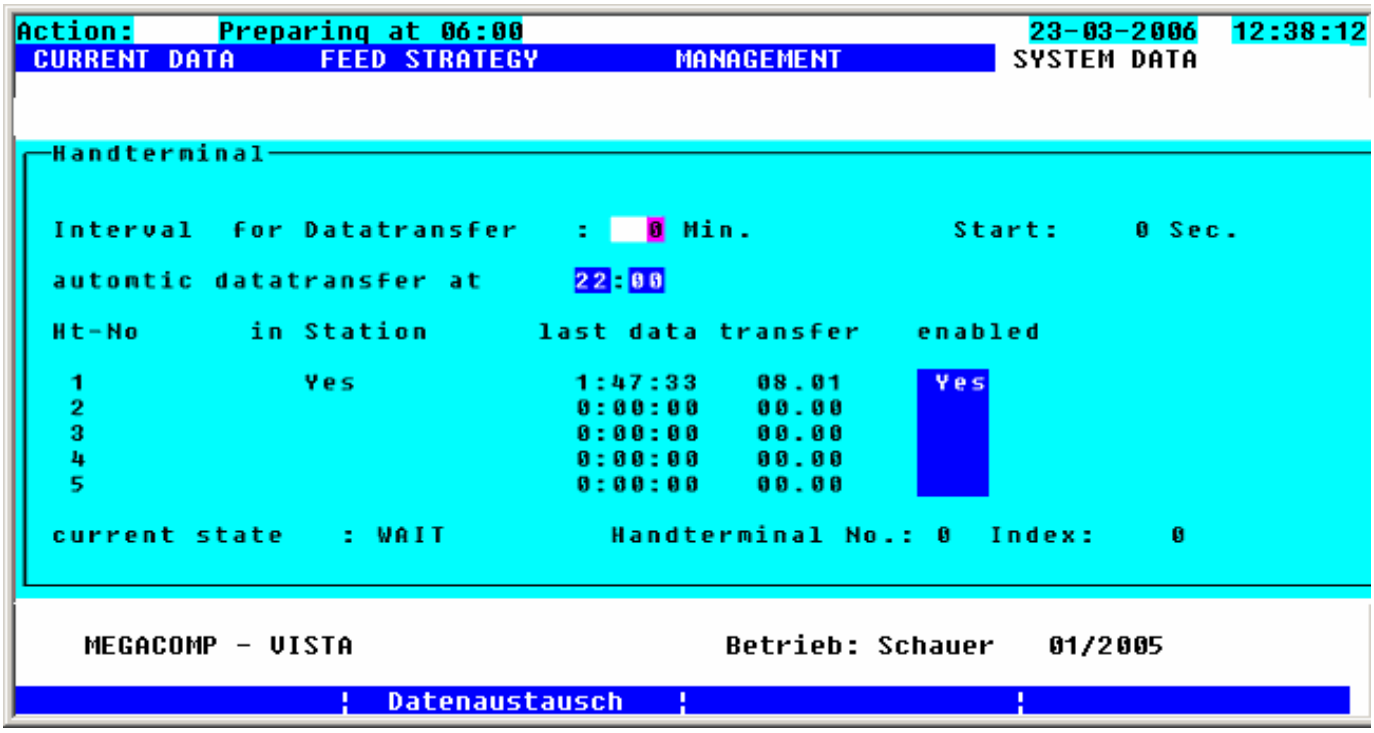
Q'ty till end

Amount until Target: This amount conforms the amount of tube content between preparation vat (Megamix) until target vat (Megacomp). Insert tube line amount, to activate the content via water pushing system out of the industrial water.
50`er pipeline 1,5 liters per meter
63`er pipeline 2,5 liters per meter

By pressing function key 1 **modem connection** in program "Times Blow Out MEGAMIX" you can carry out settings for a modem connection → read "PC-Program" - Option: "MODEM CONTROL".

2.7.9.3 Check Handterminal

With this program point you can control the data transfer by a Handterminal.
→ Read "Operating Instruction Handterminal"



Interval for Datatransfer : 0 Min. **Transfer Interval:** If you want to automatically start data transfers in regular intervals, you can determine the intervals (in minutes) between the transfers.
This function is blocked, when you enter "0".
Please note that a data transfer takes about 30 sec. per 100 animals.

Start: 0 Sec. **Next Transfer:** If a transfer interval was entered, you can see here, when the next transfer will be carried out (in sec.).

automtic datatransfer at 22:00 **Automatic Transfer:** You can determine, whether an automatic data transfer should be carried out every day on certain times.

Ht-No **Available Handterminal:** You can connect up to 5 Handterminals on one feeding computer.

in Station **In the Loading Unit:** Display **Ja** means, that the corresponding Handterminal is in the loading unit.

last data transfer **Last Transfer:** This is the time and date of the last successful transfer.

enabled **Release Handterminal:** Release all Handterminals, with which you want to carry out data transfers.

current state **State of Transfer:**

TEST	The feeding computer controls, which Handterminals are in the loading unit or which were taken back to the loading unit.
WAIT	This is the waiting time until the next check is carried out. This check shows you, which Handterminals are available.
RECEIVE	The data of the shown Handterminal are read. Only data, which were changed, are read.
SEND	All data on the feeding computer are sent to all Handterminals.

Handterminal No.: **Transfer with Handterminal:** Here you can see, with which Handterminal a data transfer is carried out at the moment.

Handterminal No.: **Transfer Progress:** This index is counted up during a data transfer. Thus you can see, whether the transfer works properly.

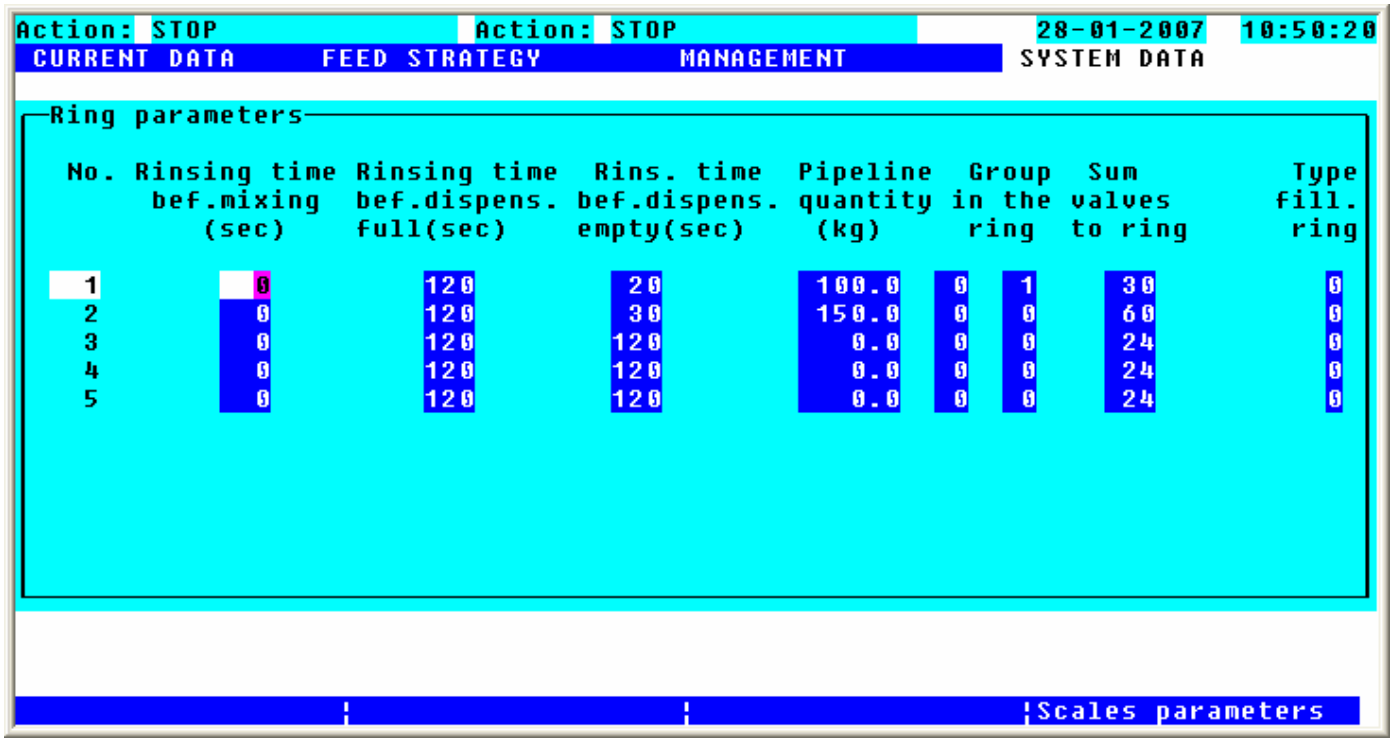
Data transfer Press function key 2, in order to start a data transfer.

2.7.10 Ring-Parameter

Here you can make settings for the ring lines.

Requirements: * The total quantity of ring lines must be entered in "Special Operating Parameter" 2.

Input:



Rinsing time bef.mixing (sec)

Rinsing Time before Preparation: (in sec.) (Standard input = 0 sec.)

Rins. time bef.dispens. full(sec)

Rinsing Time before the Dispensation – when the Ring is full: (in sec.)
The rinsing time takes about 1 sec. per metre of pipe + additional 60 sec.;
e.g.: 150 m pipes must be cleaned for about 210 sec.
You can check the rinsing time by regarding that the value of the scales does not change and that no air gets into the mixing tank during the rinsing of the ring line.
Please choose the right rinsing time, so that the feed in the ring is thoroughly exchanged and mixed with the feed in the mixing tank. Therefore you can extend or shorten the rinsing time.

Rins.time bef.dispens. empty(sec)

Rinsing Time before the Dispensation – when the Ring is empty: (in sec.)
This rinsing time can be shorter, as the ring must only be filled. You can check the rinsing time by regarding that the value of the scales does not change and that no air gets into the mixing tank during the rinsing of the ring line.
Rule of thumb: You can reach a conveyor power of about 300-400 kg in about 1 minute.

Pipeline quantity

Pipe Quantity: (in kg) Record the difference in weight when you manually fill the empty pipe, in order to find out the pipe contents.
Rule of thumb: for checking the pipe contents:
Pipe (diameter 50) 1,5 litres per metre
Pipe (diameter 63) 2,5 litres per metre

Ri. rins.

Rinse the Ring:
0 = The ring is rinsed, only if at least 1 valve is occupied on the ring.
1 = The ring is always rinsed, even if no animals are available (but the recipe number must be the same).

Group in the ring

Group in the Ring: Here is the group number of the recipe in the ring automatically inserted. After blow out there must be inserted „0“. If you intervence the automatic feeding sequence, you have to insert the group number, if the pipeline is filled, that the amount calculation suits at the next feeding.

Sum valves to ring

Sum of Valves:
This is the sum of all valves, including this ring line. (E.g.: for ring 2: you have to add the valves of ring 1 and ring 2).

Type fill. ring

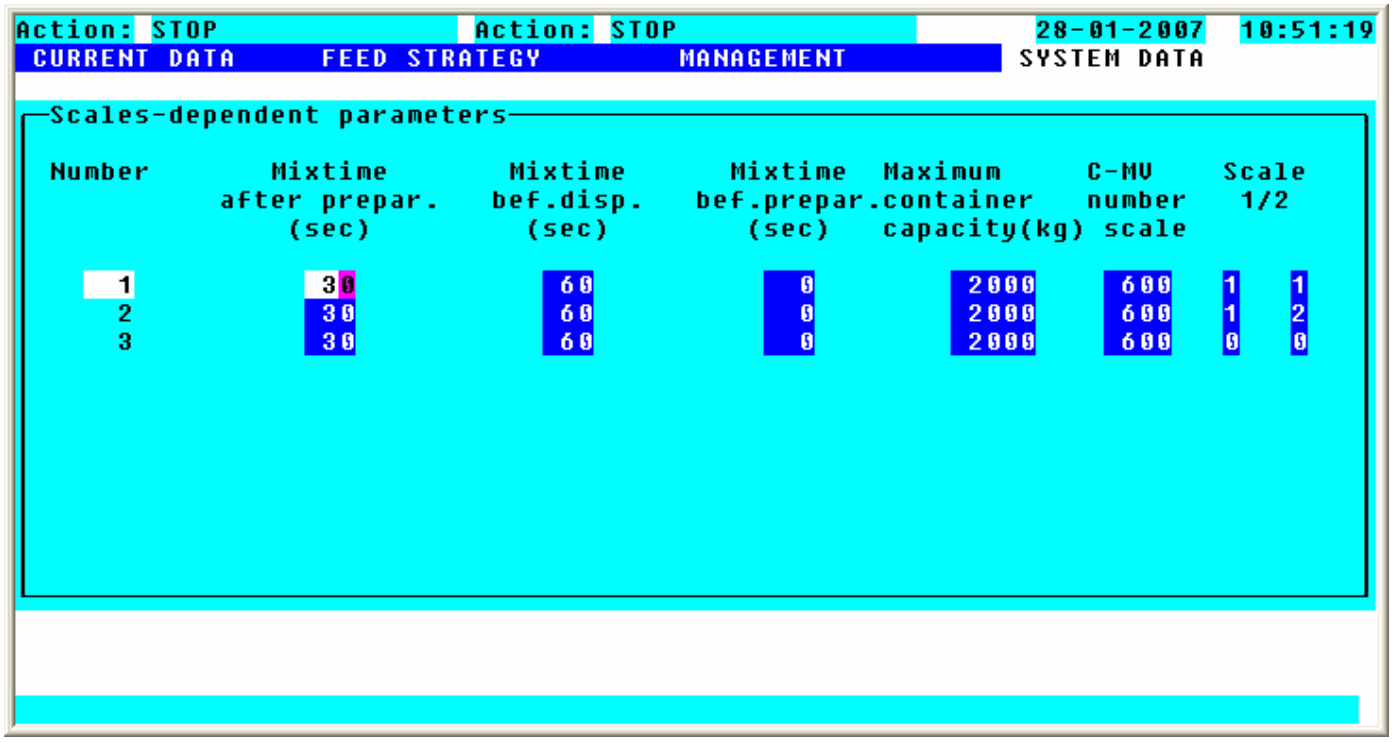
Type "Rinse the Ring":
0 = as per the rinsing time
1 = as per the rinsing time and throughput check (after the suggested rinsing time it is checked, whether the weight changes in the mixing vat. The rinsing will be stopped, if less than 3 kg change in weight is registered within 10 sec.)
2 = as per quantity (the ring is rinsed, as long as the entered pipe contents is missing in the mixing vat)

Scales parameters

Here you can make settings, which are used to control the scales.

Input:

Please note that all changes of "Scales 1" are taken over into the Operating Parameters.
Changes in the Operating Parameters are also taken over into the parameters of "Scales 1".



Number — **Scales Number**

Mixtime after prepar. — **Mixing Time after Preparation:** (in sec.)

Mixtime bef.disp. — **Mixing Time before Dispensation**: (in sec.)

Mixtime bef.prepar — **Mixing Time before Preparation:** (in sec.)

Maximum container capacity — **Max. Vat Contents:** Capacity of the weighing vat (in kg)

C-MV number scale — **Kind of Balance:** see "Special Operating Parameter" 4

C-MV number — **Number of the used C-MV-Mode**

Scale 1/2 — **Scales Input:** 1 or 2 of the used C-MV-Mode

2.7.11 Output Allocation

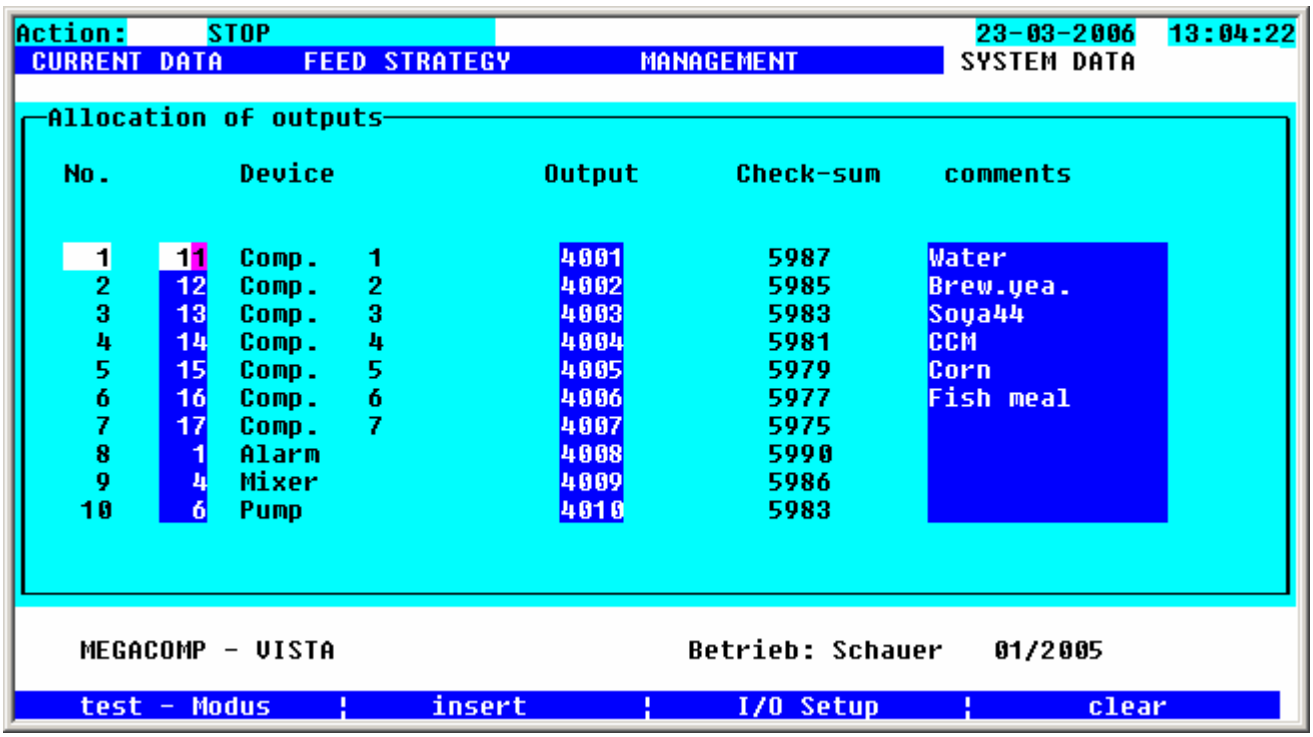
DANGER Do only make settings under consideration of instructions or after consultation with experts. All software information in this instruction is just examples and has to be adjusted to the demands of your system.
Malfunctions and damage to property can occur when you make wrong inputs.

In this program you can assign the outputs, which means that you can assign another output or several outputs to an existing signal (=gadget).

Requirements: * You can only enter this program, if no action is active, which means that on the left upper corner of the screen must be "No" or "STOP" next to “Action”.

Input:

In order to enter this program please enter the CODE (= minutes, which are displayed at the moment).



insert By pressing function key 2 you can add one or more blank lines.

clear By pressing function key 4 you can delete the line, where the cursor is currently placed.

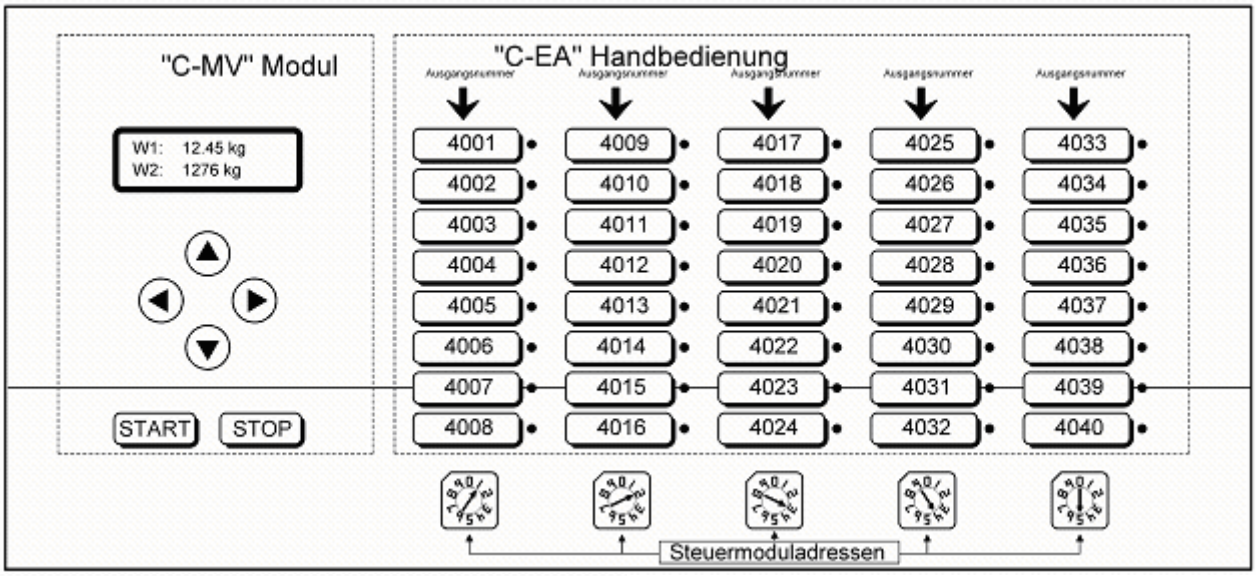
Device

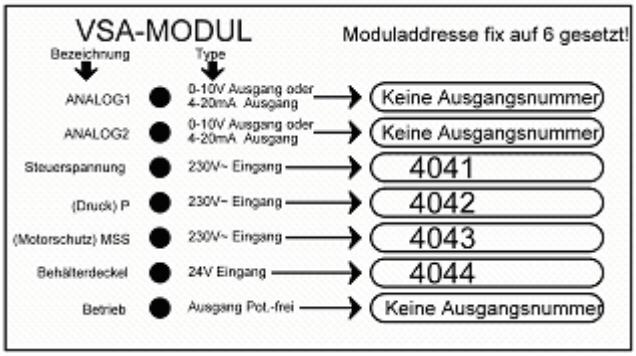
Gadget Number – Gadget Name: Every gadget number is assigned to a gadget (= signal), which can be activated or read by the feeding computer.
Put in all needed gadgets in this column. A gadget number can be used several times, if e.g. different outputs should be switched by one gadget. Please find below all possible gadget number. After the input of some gadget numbers, the name of this gadget is automatically displayed next to the number.

Output

Output Numbers: Determine, which output should be activated, when the feeding computer switches on and off the corresponding gadget.
You have to determine for the used input signals, which input should be used.
Output numbers for several C-EA-hand manuals:
1. C-EA-hand manual: 4001-4040
2. C-EA-hand manual: 4101-4140
3. C-EA-hand manual: 4201-4240

Number for the 1. C-EA-hand manual:





Check-sum

Check-Sum: Only used for service purposes.

comments

Comments: In this column you can put in additional information for the output.

I/O Setup By pressing function key 3 you can configurate the C-EA-hand manual:

```
Action:      STOP                                          23-03-2006   13:12:11
 CURRENT DATA     FEED STRATEGY        MANAGEMENT          SYSTEM DATA

 settings manu.contr.unit
          manu.contr.un.no.: 1                 connection to man.c.u: OK
  programmversion of man.u.:    0
 No.  I/O  funct.    I/O  funct.    I/O  funct.    I/O  funct.    I/O  funct.
       1              2              3              4              5

 1   4001  S - N    4009  S - N    4017  S - N    4025  S - N    4033  T - Y
 2   4002  S - N    4010  S - N    4018  S - N    4026  S - N    4034  T - Y
 3   4003  S - N    4011  S - N    4019  S - N    4027  S - N    4035  T - Y
 4   4004  S - N    4012  S - N    4020  S - N    4028  S - N    4036  X - N
 5   4005  S - N    4013  S - N    4021  S - N    4029  S - N    4037  X - N
 6   4006  S - N    4014  S - N    4022  S - N    4030  S - N    4038  X - N
 7   4007  S - N    4015  S - N    4023  S - N    4031  S - N    4039  X - N
 8   4008  T - N    4016  S - N    4024  S - N    4032  S - N    4040  X - N
     Typ:
 Version:    0.00          0.00          0.00          0.00          0.00

   MEGACOMP - VISTA                    Betrieb: Schauer    01/2005

                                                          actualize data
```

manu.contr.un.no.: 1 Please choose the C-EA-hand manual, which you want to configurate. In order to take over your settings, please press function key 4 **actualize data** or leave this program point.

connection to man.c.u: Here you can see, whether the connection of the chosen hand manual works properly.
OK means that the connection works properly.
error means that the connection can not be established → please check the settings of the C-EA – hand manual and the interface.

programmversion of man.u.: Program version of the chosen C-EA-hand manual.

I/O 1 Output number (for the Output Allocation) of the chosen hand manual.

funct. Display and setting of the inputs and outputs.
With function key 3 **change** you can set the outputs or inputs.
By pressing function key 2 **change total row** you can set a complete line.

In the first column you can set, how to operate inputs or outputs on the hand manual:
X Outputs respectively inputs can not be operated on the C-EA-hand manual. (Except: during the emergency operation → Read "Operating Instructions VISTA-TABLA").
S Outputs and inputs can be switched on and off on the C-EA-hand manual.
T Outputs and inputs can tentatively be switched on the C-EA-hand manual.

In the second column it is displayed, whether an output mode **O** or input mode **I** is connected. If this symbol **–** is shown, no mode is connected.

In the third column you can determine for every output with a V-KMD-mode, whether the current supervision should be activated:

N Current supervision is <u>not</u> active.

Y Current supervision is active. The current flows of these outputs are constantly controlled. Two malfunctions may occur:

- A current flow is recognized, although there is no output activated→ after 5 seconds, the power supply of the outputs will be switched off and the displays M1-M8 will blink.
  You have to bridge the RESET-pins, so that the mode is ready for operation again. If an impermissible current flow is recognized again, the mode switches off again after 5 seconds.
- No current flow is recognized, although an output is activated → the corresponding output is still activated and the output display starts to blink.

HINT	The function monitoring of the current flow is carried out for the complete mode and not for every output. This current flow can only be supervised and evaluated by the process computer during the automatic actuation.

```
    Typ: VRB16
Version:   1.01
```

The name and the program version are displayed for every recognized mode.

test - Modus By pressing function key 1 you can switch to "Test Mode". This mode is only used for service purposes and it should only be used after consultation with experts.

2.7.11.1.1 Gadget Numbers

Gadget:	Gadget No.:	Output:
Alarm	1	
Warning	2	
Pump-Mix (with compact plant)	3	
Mixer	4	
Vat cleaning without to pump	5	
Vat cleaning with pump water	153	
Cleaning with fresh water	152	
Acid Dosage (after the cleaning)	154	
Pump	6	
Pump 2	7	
Cylinder	8	
Main valve	9	
Rinse pump	10	
Ring open / closed	80	
Bypass	145	
Valves	200	
Component 1	11	
Component 2	12	
Component 3	13	
Component 4	14	
Component 5	15	
Component 6	16	
Component 7	17	
Component 8	18	
Component 9	19	
Component 10	20	
Component 11	21	
Component 12	22	
Component 13	23	
Component 14	24	
Component 15	25	
Component 16	26	
Component 17	27	
Component 18	28	
Component 19	29	
Component 20	30	
Component 21	31	
Component 22	32	
Component 23	33	
Component 24	34	
Component 25	35	
Component 26	36	
Component 27	37	
Component 28	38	
Component 29	39	
Component 30	40	

Gadget:	Gadget No.:	Output:
Component 1 Fine Dosage	221	
Component 2 Fine Dosage	222	
Component 3 Fine Dosage	223	
Component 4 Fine Dosage	224	
Component 5 Fine Dosage	225	
Component 6 Fine Dosage	226	
Component 7 Fine Dosage	227	
Component 8 Fine Dosage	228	
Component 9 Fine Dosage	229	
Component 10 Fine Dosage	230	
Component 11 Fine Dosage	231	
Component 12 Fine Dosage	232	
Component 13 Fine Dosage	233	
Component 14 Fine Dosage	234	
Component 15 Fine Dosage	235	
Component 16 Fine Dosage	236	
Component 17 Fine Dosage	237	
Component 18 Fine Dosage	238	
Component 19 Fine Dosage	239	
Component 20 Fine Dosage	240	
Component 21 Fine Dosage	241	
Component 22 Fine Dosage	242	
Component 23 Fine Dosage	243	
Component 24 Fine Dosage	244	
Component 25 Fine Dosage	245	
Component 26 Fine Dosage	246	
Component 27 Fine Dosage	247	
Component 28 Fine Dosage	248	
Component 29 Fine Dosage	249	
Component 30 Fine Dosage	250	
Forward Flow 1	41	
Forward Flow 2	42	
Forward Flow 3	43	
Forward Flow 4	44	
Forward Flow 5	45	
Forward Flow 6	46	
Forward Flow 7	47	
Forward Flow 8	48	
Forward Flow 9	49	
Forward Flow 10	50	
Forward Flow 11	51	
Forward Flow 12	52	
Forward Flow 13	53	
Forward Flow 14	54	
Forward Flow 15	55	
Forward Flow 16	56	
Forward Flow 17	57	
Forward Flow 18	58	
Forward Flow 19	59	

Gadget:	Gadget No.:	Output:
Return 1	61	
Return 2	62	
Return 3	63	
Return 4	64	
Return 5	65	
Return 6	66	
Return 7	67	
Return 8	68	
Return 9	69	
Return 10	70	
Return 11	71	
Return 12	72	
Return 13	73	
Return 14	74	
Return 15	75	
Return 16	76	
Return 17	77	
Return 18	78	
Return 19	79	
Empty 1	81	
Empty 2	82	
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Empty 6	86	
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Fill preliminary-vat 6	96	
Fill preliminary-vat 7	97	
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Fill preliminary-vat 10	100	

Gadget:	Gadget No.:	Output:
Light Output 1	101	
Light Output 2	102	
Light Output 3	103	
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Light Output 6	106	
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Fresh Water for TURBO-JET	147	
Pump Water Vat 1 TURBO-JET	179	
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Scales 3 active	141	
Air compressor for system pressure	146	
Pump	150	
Return together	151	
Screensaver (Output 90)	198	
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Medicine dispenser 1-9	291-299	
All gadgets	201	
Speed controller Step A	800	
Speed controller Step B	801	
Speed controller Step C	802	
Component flap 1	805	
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Conveyor path 1	807	
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Mixer-component 1-40	811-840	
Failure system pressure (Input VSA-Mode)	621	
Failure control voltage 230V (input VSA-Mode)	623	
Failure motor protecting switch (Input VSA-Mode)	624	
Failure vat cover is open (Input VSA-Mode)	625	
Failure control voltage 24V (Input)	622	
Failure no voltage, entry card (Input)	630	
Read probe (AD-LIBITUM) input	603	
Recipe 1	701	
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Recipe 5	705	
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Group 1 GENPRO	721	
Group 2 GENPRO	722	
Group 3 GENPRO	723	
Group 4 GENPRO	724	
Group 5 GENPRO	725	
Group 6 – 40 GENPRO	726-760	
Easyfeed - Pump	143	
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Signal Distribute	156	
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Tool (Extra tools for Simultan plants):	Toolnumber:	Exit:
Prepare vat 2	180	
Distribute vat 2	182	
Mixer Vat 1	4	
Mixer Vat 2	3	
Pump-Mix Vat 1	181	
Pump-Mix Vat 2	183	
Pump Vat 1	1006	
Pump Vat 2	1106	
Main Valve Vat 1	1009	
Main Valve Vat 2	1109	
Bypass Vat 1	145	
Bypass Vat 2	1145	
Ring open / closed Vat 1	1080	
Ring open / closed Vat 2	1180	
Rinse Pump Vat 1	1010	
Rinse Pump Vat 2	1110	
Component 1 Vat 1	501 or 184	
Component 1 Vat 2	901or 185	
Component 2 Vat 1	502 or 186	
Component 2 Vat 2	902 or 187	
Component 3 Vat 1	503 or 188	
Component 3 Vat 2	903 or 189	
Component 4-32 Vat 1	504-532	
Component 4-32 Vat 2	904-932	
Component-Flap 1 - Vat 1	805	
Component-Flap 1 - Vat 2	985	
Component-Flap 2 - Vat 1	806	
Component-Flap 2 - Vat 2	986	
Signal Final Cleaning Vat 1	132	
Signal Final Cleaning Vat 2	1132	
Vatclean. With Pump Water Vat 1	153	
Vatclean. With Pump Water Vat 2	1153	
Clean With Freshwater Vat 1	152	
Clean With Freshwater Vat 2	1152	
Acid Dosage (after cleaning) Vat 1	154	
Acid Dosage (after cleaning) Vat 2	1154	
Blow Out Pipeline Compressed Air - Vat 1	160	
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Blow Out Pipeline Compressor - Vat 1	161	
Blow Out Pipeline Compressor - Vat 2	1161	
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Blow Out Pipeline Get Water - Vat 2	1162	
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Water Final Cleaning - Vat 1	163	
Water Final Cleaning - Vat 2	1163	

Tool (Extra tools for Simultan plants):	Toolnumber:	Exit:
Forward Motion-Turbo-Clean - Vat 1	164	
Forward Motion-Turbo-Clean - Vat 2	1164	
Return Movement-Turbo-Clean - Vat 1	165	
Return Movement-Turbo-Clean - Vat 2	1165	
Blow Out Ring-Pump - Vat 2	1166	
Rotational speed Regulation Step A - Vat 1	800	
Rotational speed Regulation Step B - Vat 1	801	
Rotational speed Regulation Step C - Vat 1	802	
Rotational speed Regulation Step A - Vat 2	1800	
Rotational speed Regulation Step B - Vat 2	1801	
Rotational speed Regulation Step C - Vat 2	1802	

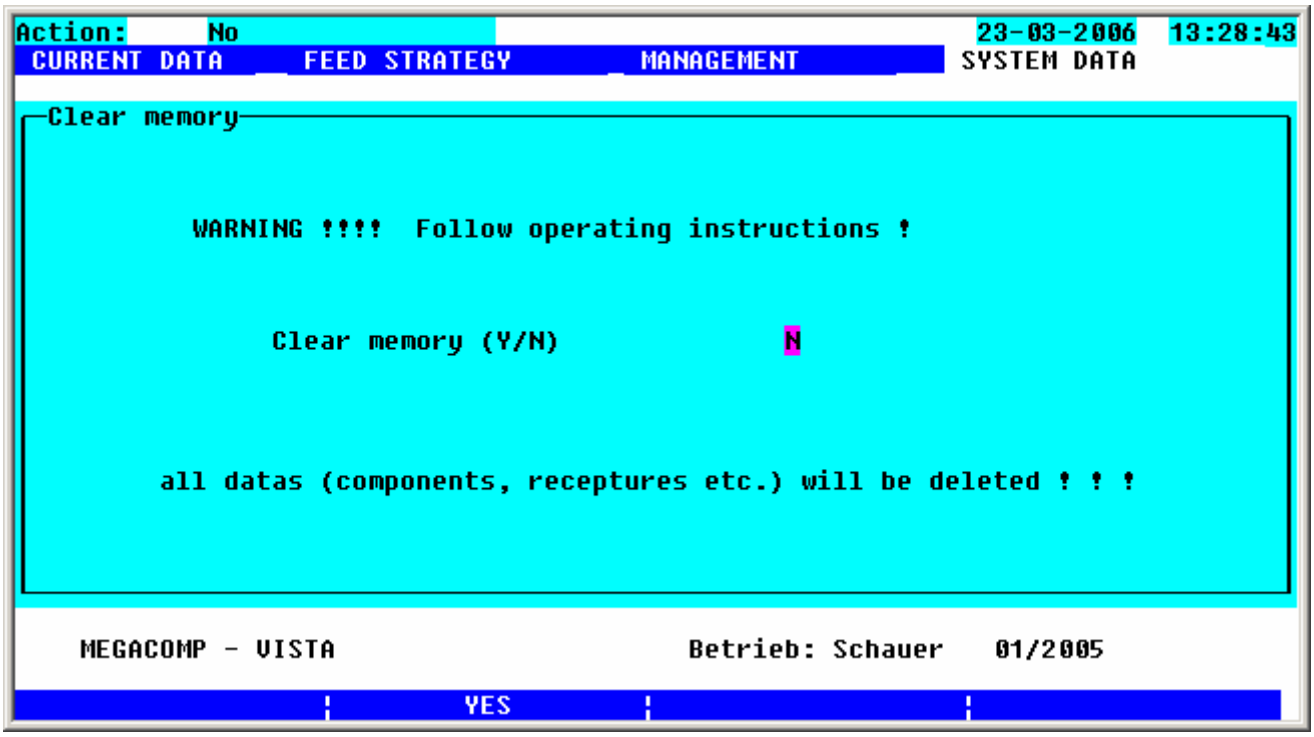
2.7.12 Clear Memory

HINT	With this program point you can delete several data.

Requirements: * You can only open this program point, when no action is active; you can see this in the left upper corner of screen; next to Action: "NO".

Input:

In order to open this program, you have to enter the MINUTES, which are displayed at the moment, as a CODE.



If YES (=function key 2) is pressed, ***all entered data are deleted***.

Press the ENTER-key to leave this program point, without deleting data.

2.8 FEEDING SEQUENCE

2.8.1 Preparation (general)

1. Control of the VSA-Mode: control voltage, system pressure, motor loss and vat cover

2. Waiting time before preparation (as per “Daily Program” and “General Operating Parameter 25”).

3. Switch to a higher system pressure (“Special Operating Parameter” 14, Standard = 0 sec.)

4. Before every preparation, all trough sensors can be read to find out, which troughs are empty. In "Valve Control" the identification of all empty troughs is set to "1" (=feed), except there is "2" (=always fed) put in.
   The sensors can additionally be read after a feeding, in the case of a wellness-feeding. (read “Wellness-Feeding”).

5. Calculation of the feed quantity;
   In the case of Ad Libitum with control of the minimum quantity for feeding (“Special Operating Parameter” 21).

6. Empty preliminary-vat (is released in Recipe-Parameter):
   The indicated value in "Lower Limit Empty Quantity” (“Special Operating Parameter” 26) is important for emptying and filling the preliminary-vat.

   Input "0" - Preliminary-vats are not used; remaining quantity is in the feeding vat;

   Input > "0" - Preliminary-vats are used; the preliminary –vats are used depending on the recipe;

   If necessary, the emptying connection can be rinsed a suggested time, before the preliminary-vat with the contents of the feed vat is emptied. This time (“Rinse preliminary-vat”) can be entered in "Special Operating Parameter 29".

   The action "Empty" is stopped, if the suggested control quantity does not come into the feeding vat during the suggested control time. (“Special Operating Parameter” 27, 28, 33)

   The mixer in the feeding-vat will only be switched on during emptying, if in “Mixing Time before Preparation” (“General Operating Parameter” 1) a mixing time of more than "0" is put in.

   The quantity, which comes from the preliminary-vat, is controlled. At least the pipe contents of the shortest ring (Ring-Parameter) minus “Fill Warning Quantity” (“Special Operating Parameter” 31) must be available. Otherwise the computer stops the following actions.

7. Calculation of the remaining feed quantity;
   Quantity, which must be prepared = Quantity of valves, which must be fed * percentages of the Daily Program + additional quantity + pipe contents of the last ring, which must be fed (if necessary + quantity, which is required to fill and feed the remaining rings);

8. Control, if the required feed quantity is bigger than the vat contents
   (“Special Operating Parameter” 5).

9. Mixing Time before Preparation (“General Operating Parameter” 1, Standard = 0 sec.)

10. Rinsing Time of Pump before Preparation (“General Operating Parameter” 9, Standard = 0 sec.)

11. Rinsing Time before Preparation (Ring-Parameter, Standard = 0 sec.)
12. Bring in liquid components (water, whey)
13. Bring in small components with only a few kilos (mineral nutrients, ...)
14. Switch on the mixer (“Component Control”).
15. Bring in the remaining components;
16. During preparation of the components, the component flaps can be switched on. (“General Operating Parameter” 21-22, “Component Data”).
    Conveyor paths or vibrator can be switched on as well (“General Operating Parameter” 23-24, “Component Control”).
17. During preparation of the components, the throughput can be controlled, in order to identify a failure or to switch to a substitute component. It is possible to adjust every kind of dosage to every component. (“Component Control”, “Special Operating Parameter” 15, 83).
18. Max. after run and overflow of the components are controlled; (“Special Operating Parameter” 6, 7).
19. After having brought in the components, the scales and the "Control Time - turning off the Components" (“Special Operating Parameter” 10) must be solid, so that the after run of the components can be regulated.
20. Waiting time after the switch off of the component (“Component Control”).
21. Mixing Time after Preparation (“General Operating Parameter” 2, 28)
22. Soaking Time (Recipe-Parameter, “General Operating Parameter” 3, 4)

2.8.2 Dispensation (general)

1. Mixing Time before Dispensation (“General Operating Parameter” 6).
2. Mixing Time before the Beginning of Dispensation (“General Operating Parameter” 7).
3. Switch on the light – since the start of mixing or dispensation (“General Operating Parameter” 16)
4. Rinsing Time of Pump before Dispensation (“General Operating Parameter” 10).
5. Delay of switching off the “Rinse the Pump”-signal (“General Operating Parameter” 26), during this time the ring is filled (rinsed).
6. Rinsing time of the ring after mixing (Ring-Parameter, Standard = 0 sec.).
7. Fill ring 1 (Rinsing Time before Dispensation → Ring-Parameter and Special Operating Parameter 58); The quantity, which is pumped into the ring, is controlled (max. quantity = Quantity of the ring (Ring-Parameter) + Fill Warning Quantity (“Special Operating Parameter” 31).
8. Rinsing Time during Change of Rings, first Ring (“General Operating Parameter” 11).
9. Option: for throughput regulation: Switch from full throughput to minimum throughput. (Waiting time: “Special Operating Parameter” 52).
10. Option: for throughput regulation: Waiting time between minimum throughput and the actuation of the feed valve. (“Special Operating Parameter” 53).

11. Feed the 1. valve on the first ring.
    Option: for throughput regulation: First step at the beginning of feeding the valve (“Special Operating Parameter” 56).

12. Option: for throughput regulation: Steps for Throughput Regulation (“Special Operating Parameter” 49), Throughput Check, in order to switch to the next higher and lower step (“Special Operating Parameter” 54,55), Minimum Throughput Quantity of the last Step (“Special Operating Parameter” 51).

13. Time pressure surge (Valve Control; the return is always closed during the throughput regulation by the frequency converter).

14. “Switch Quantity Bypass for Fine Dosage” (“Special Operating Parameter” 11; it is not active during the throughput regulation by frequency converter).

15. Control the after run of the valve (“Special Operating Parameter” 8).

16. Waiting time between two valves ("Special Operating Parameter" 13).

17. Feed further valves

18. Empty ring 1 with compressed air respectively Turbo Clean
    1. Blow-out the pipe with compressed air (Minimum Quantity Blow-Out Compressed Air “Special Operating Parameter” 23).
    2. Blow-out the pipe with compressor
    3. Blow-out with compressor with water supply
    4. Clean valves - includes the time (in percent) of water supply during cleaning of valve. (if an end cleaning is entered; the valves can be cleaned during this cleaning)
    5. After run of the compressor

    (The times can be entered in "Times Blow out" → "Times TC-Standard" and "Blow out Sequence")
    Control: the minimum quantity, which must come back = Pipe contents (Ring-Parameter) minus “Empty Warning Quantity” “Special Operating Parameter” 30)

19. Fill further rings (Filling times = Rinsing time before dispensation, read “Ring-Parameter”).

20. Feed further rings.

21. Switch off quantity of the mixer (“General Operating Parameter” 8, Standard 0 kg).

22. Empty further rings with Turbo Clean – Standard.

    Cleaning of the mixing tank before blow-out of the last ring main (if released by “Special Operating Parameter” 26); bring in the cleaning component (as per Daily Program and “General Operating Parameter” 14,15).

23. Empty the last ring with Turbo Clean – Standard.

24. End cleaning of the pipes (if it is released → read Daily Program; for Times, please read "Times Blow out" in "Times TC- End of Feeding"
    1. Blow out of the pipes with compressor
    2. Blow out with compressor and water supply for cleaning of pipes
    3. Clean valves - includes the time (in percent) of water supply during cleaning of valve
    4. After run of the compressor

25. Concerning preliminary-vat: Pump the quantity into the corresponding vat (which is chosen in the Recipe Parameter).
    It is pumped as long as the quantity in the feeding vat falls short of the suggested value (Lower Limit Empty Quantity – “Special Operating Parameter” 26) and afterwards the suggested time (After Run Pump – “Special Operating Parameter” 25) elapses.

    During pumping it is additionally controlled, whether a certain quantity (“Special Operating Parameter” 28) is pumped within the suggested period (“Special Operating Parameter” 27). If there are problems during pumping (e.g. the quantity is not pumped within this time) the computer stops the plant and shows the failure "Blocked".

26. Switch off the light (as per Daily Program; in the case of Separate Start – “General Operating Parameter” 12).

27. Bring in the cleaning component (as per Daily Program and “General Operating Parameter” 14, 15).

28. Cleaning of the tank (as per Daily Program; in the case of Separate Start – “General Operating Parameter” 13).
    (Tank is only cleaned, if the cleaning was not carried out before the blow out of the last piping).

29. Cleaning of the tank with fresh water (if requested, it can be released in “General Operating Parameter” 18, gadget 152).

30. Acid dosage with acid fogger (“General Operating Parameter” 27).

2.8.3 Option: Wellness Feeding

Wellness Feeding is the automatic adjustment to the feed requirement of the animals. Through sensors control, how fast the animals eat the apportioned feed quantity.

The following inputs are necessary, in order to carry out a Wellness Feeding:

Daily Program:

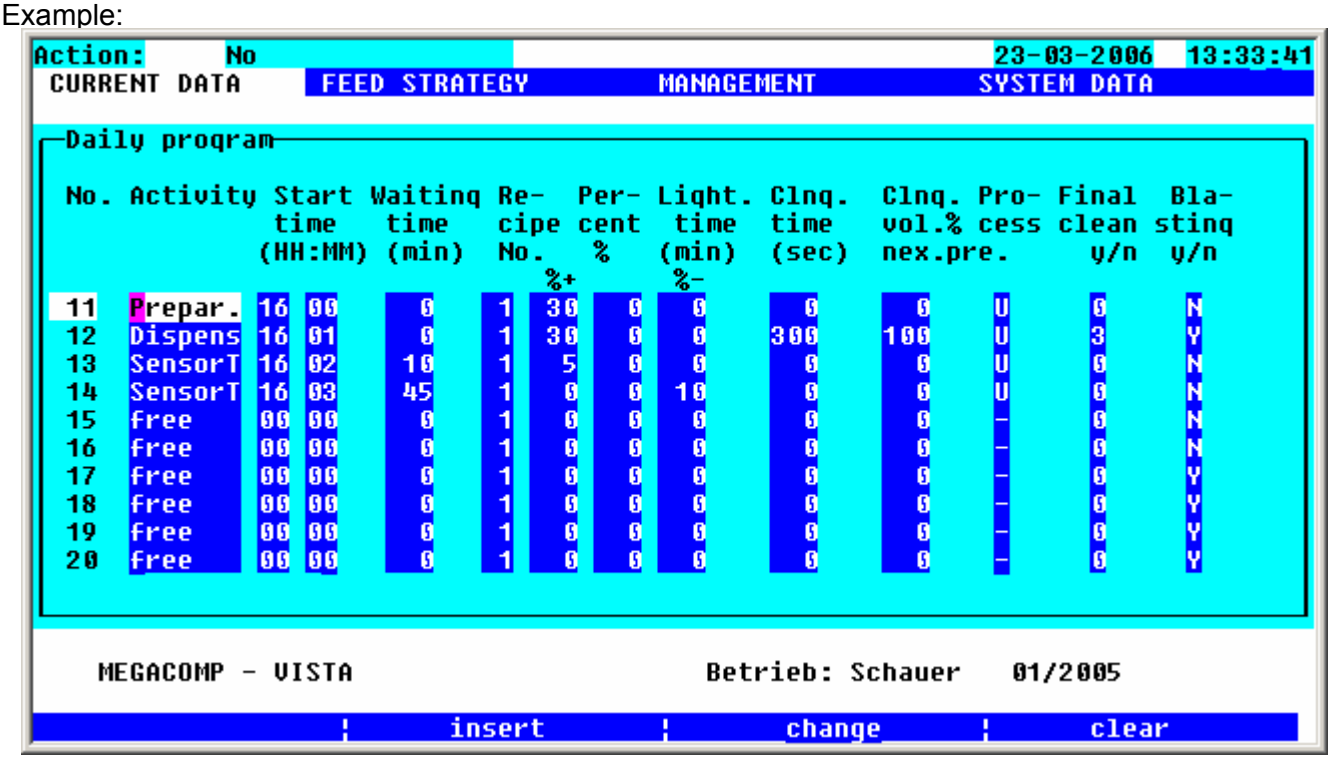
- You have to put in two daily points after every feeding in the daily program; with action SensorT (sensor test).

- In addition to the entered time for the sensor test, the trough sensors are read.
  Put in the minutes in Waiting time, after which a sensor test should follow; after the feeding of the last feeding point.
  After about 10 minutes please control, whether the feed is too less.
  After about 45 minutes please control, whether the feed is too much.

  (ATTENTION: Dispensation and the sensor test must be carried out on the same day, otherwise the program stands still on action " Wait for Sensor Test".

- During a sensor test, the feed quantity of empty troughs is automatically increased by the percentage, which is indicated in %+. This means, that the portions of the feed curve quantity are increased in the "Stable Plan".
  The feed quantity of full troughs is automatically reduced by the percentage, which is indicated in %-. This means, that the portions of the feed curve quantity are reduced in the "Stable Plan".

Example:



No.	Activity	Start time (HH:MM)		Waiting time (min)	Re-cipe No.	Per-cent % %+	Light. time (min) %-	Clng. time (sec)	Clng. vol.% nex.pre.	Pro-cess	Final clean y/n	Bla-sting y/n
11	Prepar.	16	00	0	1	30	0	0	0	0	U	0	N
12	Dispens	16	01	0	1	30	0	0	300	100	U	3	Y
13	SensorT	16	02	10	1	5	0	0	0	0	U	0	N
14	SensorT	16	03	45	1	0	0	10	0	0	U	0	N
15	free	00	00	0	1	0	0	0	0	0	-	0	N
16	free	00	00	0	1	0	0	0	0	0	-	0	N
17	free	00	00	0	1	0	0	0	0	0	-	0	Y
18	free	00	00	0	1	0	0	0	0	0	-	0	Y
19	free	00	00	0	1	0	0	0	0	0	-	0	Y
20	free	00	00	0	1	0	0	0	0	0	-	0	Y

Stable Plan:

- Due to a sensor test, the percentage value in column Pro-port (feeding curve portion in percentages) will be corrected.
  An automatic adjustment of the portions (Wellness-System), is only possible between 0% and 100%. Therefore the max. possible feed curve quantity, which can be fed per day, is 100 % (Wellness-System).

  If you put in more than 100 % in Pro-port, Wellness blocks the automatic adjustment.

Control Valves:

- Put in a 3 in column Valv feed ?, for all valves, which are fed by the Wellness-System.

  There are the following input possibilities:
  0.....do not feed the valve (for Ad Libitum-Feeding)
  1.....feed the valve (for Ad Libitum-Feeding)
  2.....do always feed the valve (trough sensors are not read)
  3…..Wellness-Feeding

2.8.4 Option: MEGAMIX-System

MEGAMIX-System means, that the feeding computer (=MEGAMIX) is in a position to prepare feed quantities for several different feeding computers (=MEGACOMP).

Please mind the following program points for the MEGAMIX-System:

Start Automatic:

- As soon as the automatic is started and no preparation or feeding on the MEGAMIX is active, the MEGAMIX controls constantly, whether a MEGACOMP sends an order for a feed preparation. If an order is sent by a MEGACOMP, the single component quantities are taken over and prepared. After the finished preparation, the feed quantity is pumped into the mixing tank of the corresponding MEGACOMP.

Operating Check:

- In "Extra"→"command/residual quantities" Megamix Mengen command quantities (in kg), which were sent to the MEGAMIX, are shown. As it is possible, that the MEGACOMP prepares some components itself, only those quantities are sent to the MEGAMIX, which are prepared by the MEGAMIX. → read "Component Data"

Separate Start MEGAMIX:

- With this program you can start the automatic preparation for a MEGACOMP, without sending a quantity requirement. After the finish of the preparation, the quantity is pumped into the mixing tank of the corresponding MEGACOMP.
- Only available for MEGAMIX

HINT	During pumping, the quantity is not controlled in the target mixing tank.

- Further details → read MEGAMIX in "Separate Start Megamix"

Daily Program
Option: "Bring Forward Preparation"

If you have set “Bring Forward the Preparation“, the Megamix already demands the quantity for the next preparation, during the dispensation.
For this purpose you have to release "Bring Forward the Preparation" in "Megamix Parameter" 5 (in “Ring-Parameter).

Please consider the following point in the daily program:
The start time of a preparation, which you wish to bring forward, must be the same as the start time of the dispensation, which you want to bring forward.

Please do not carry out a vat cleaning during the dispensation (in the case of “Bring Forward the Preparation”), as the cleaning quantity can not completely be considered. Therefore it can be possible that the recipe for “Bring Forward the Preparation” is falsified.

Component Data:

- The MEGACOMP actuates Component 2 (and the mixer, if it is released for this component), during the waiting time until the MEGAMIX has prepared the required feed quantity. This signal can be used for control purposes. Therefore Component 2 should not be used as a real feed component.
  On the MEGACOMP the required total feed quantity (which is prepared at the moment) is shown as the command quantity of Component 2.
- It is possible, that the MEGACOMP prepares some components itself. In this case you have to wait, until the required feed quantity of the MEGAMIX is prepared and until it is pumped into the mixing tank of the MEGACOMP. Only then the components, which are prepared by the MEGACOMP itself, are demanded.
- In column Aufber. M/D you can set, which component is prepared by which computer.
  Input M: this component is prepared by the MEGAMIX;
  Input D: this component is directly prepared by the MEGACOMP;

Component Control:

- You must not put in a throughput check on the MEGACOMP for Component 2. (=Preparation MEGAMIX).
- The mixer must also be deactivated for Component 2 (in most cases).

Group-Parameter:

- In No.of pipeline for recirc. you have to put in the pipe number, which should be actuated during pumping to the target (mixing tank of MEGACOMP).
  (Gadget number for "Pump Pipe 1-10" = 291-300)

Operating Parameter:

- Read "Special Operating Parameter" → "Option: Parameter of MEGACOMP at MEGAMIX-Plant" and "Option: Parameter MEGAMIX"

Output Allocation:

- Additional controllable gadget:

Pump-forward flow (target) vat 1–5 for MEGAMIX:	gadget number 181-185
Pump- return vat 1-5 for MEGAMIX:	gadget number 186-190
Pump pipe number 1-10 for MEGAMIX:	gadget number 291-300

- There are additional inputs for the MEGAMIX:

Control preparation active for MEGAMIX:	gadget number 169

  This input controls, if another computer uses a component at the moment. (Action = wait until prep. free)
  If this input is not required, you have to put in: gadget 169 on output 292, in the “Output Allocation”.

OPERATING INSTRUCTION – PC-PROGRAM

MEGACOMP
MEG VISTA and MEG TABLA

SCHAUER
ALWAYS ONE IDEA AHEAD

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3 PROGRAM FOR PC

3.1 GENERAL

Please find the following programs on the delivered CD:

For System Software Windows 95/98/2000/ME, Windows NT 4.0

Installation of the Programs for the Data Transfer:

In file **\programs** you will find the installation program **SETUP.EXE** for system software Windows 95/98/2000/ME, Windows NT 4.0.
With this installation program you can install the transmission programs for the data transfer between the feeding computer and your PC.

Please do the following:

1.) Insert the disc, which we have delivered, into the corresponding drive.
2.) Choose the drive in the Explorer.
3.) Call up the installation program **SETUP.EXE**.
4.) Enter the required data in the correct order.
5.) When all data has been entered, you can start the interface-program.
6.) In the case of wrong inputs, you have to start the installation program once again.

Installation of the Windows-Online-Interface Program:

In file **\programs\online1500\144mb\disc1** you will find the program **SETUP.EXE** for system software Windows 95/98/2000/ME, Windows NT 4,0 for the installation of Windows– Online – Interface between the PC and the feeding computer.

Please do the following:

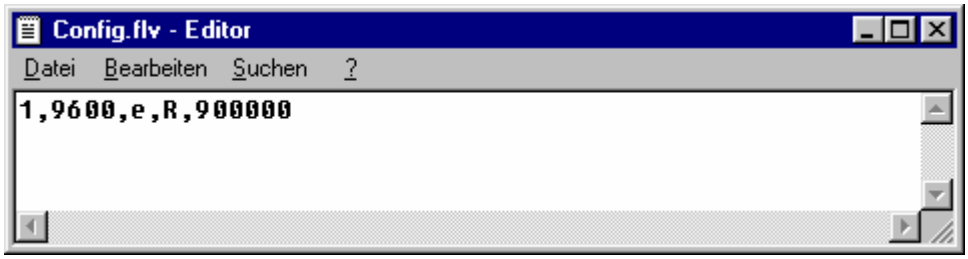
1.) Insert the disc, which we have delivered, into the corresponding drive.
2.) Choose the drive in the Explorer.
3.) Call up the installation program **SETUP.EXE**.
4.) Enter the required data in the correct order.
5.) When all data has been entered, you can start the interface-program.
6.) In the case of wrong inputs, you have to start the installation program once again.

Operating Instructions

In file **\operating instructions** you will find instructions for your feeding computer.

Configuration file Config.flv

This file is used to determine the interface features for PC – data transfer.
The file CONFIG.FLV is automatically established during the installation of the setup- or installation program. If you copy the PC – interface program manually to PC you have to adapt or change the file CONFIG.FLV with the help from the EDITOR (e.g. Windows NOTEPAD).



Order of Inputs:

* the first number shows the PC-interface:	**1,** = interface 1 (com1) **2,** = interface 2 (com2)
* the second number shows the Baud rate:	**19200,** (standard setting: for CPU32F 19200, for CPU32 9600)
* parity of interface:	**e,** (e = even (standard setting), n = no;)
* RTS - signal:	**R**, (RTS signal, necessary for "Windows NT", Windows 2000, and Windows XP)
* the third number shows the TIME OUT:	**900000** (standard setting)

Data Transfer

- If data are transferred in this program (e.g.: PC – feeding computer, program - hard disk,....) this can be seen by a line, similar to the line as specified below, which appears at the lower left corner of the screen. Please note that the number increases while data are transferred:

- If an error occurred, then an error message similar to the following would appear at the lower right corner of the screen:

In this case, the transfer must be restarted.

- If all data are transferred, the following message will be shown:

Now you can continue in the program.

- After calling up the program, you are asked whether data of the feeding computer or of a backup of the hard disc should be taken over.

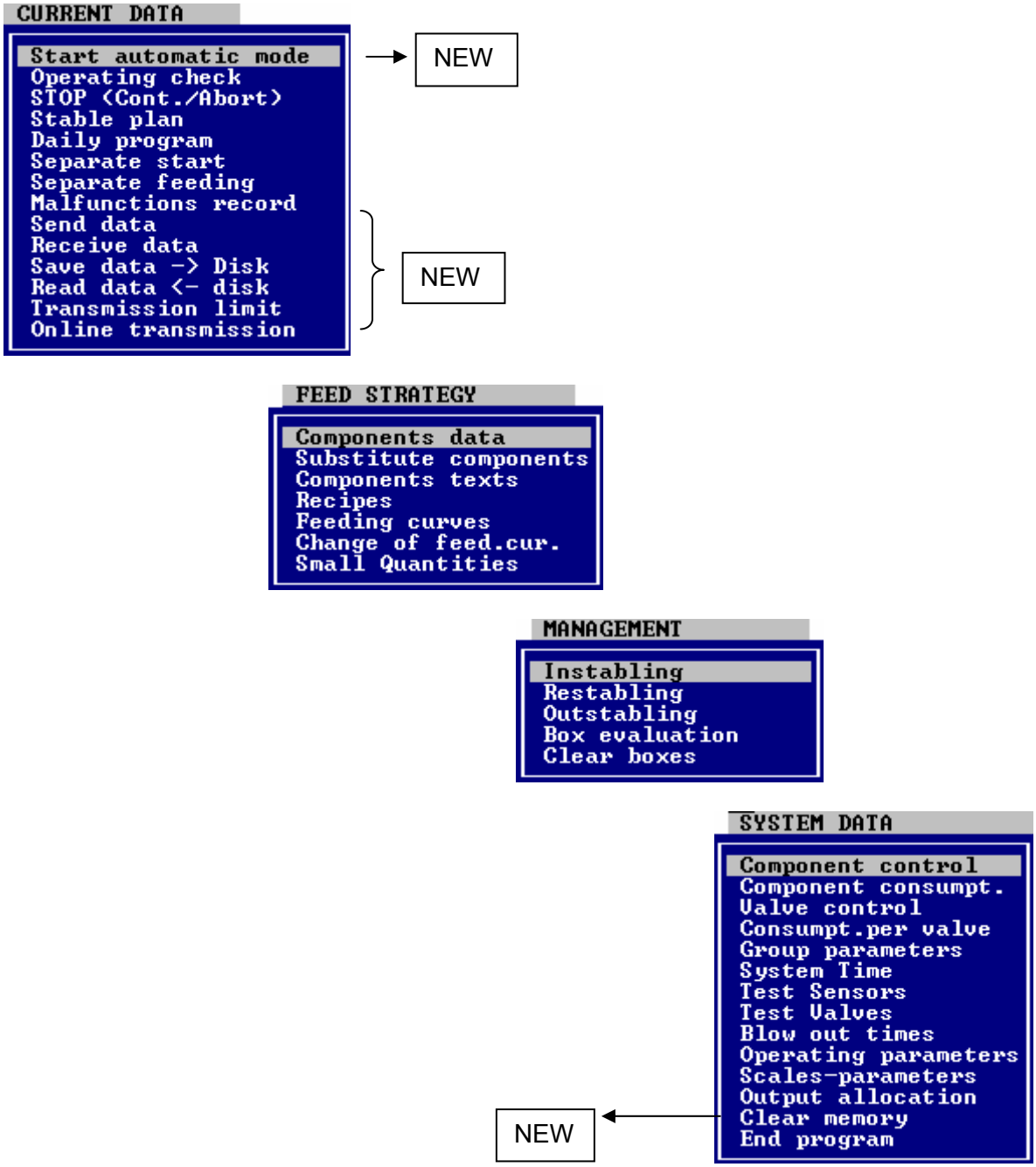
If you wish to take over data at the beginning, the relevant point must be selected with the help of function key 2 YES. If no data should be taken over, press the YES key in Continue and you will return to the menu.

3.2 Program for Data Backup for PC

The program for data saving is used for the back-up of the entered data. Data can be saved and exchanged between PC and feeding computer.

The PC program consists of several main programs, like the programs of the feeding computer. All main programs, in turn, are divided into several subprograms.
The program structure is shown below in order to make the overview of the different programs clearer.

Only the marked program points differ from the program of the feeding computer.



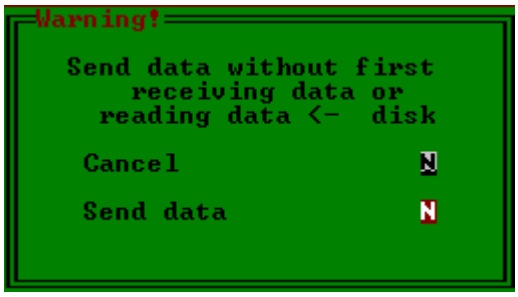
3.2.1 Start Automatic Mode

With this program point you can START or STOP the automatic mode of the MEGACOMP-plant via personal computer. By using function key 2 START you can activate the automatic mode. Please use function key 3 STOP in order to interrupt the automatic mode. Subsequently the automatic mode can be aborted or continued with the program point "STOP (Cont./Abort.)".

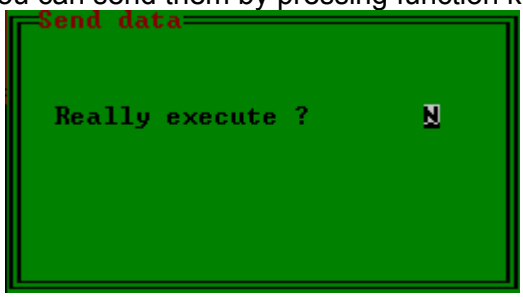
3.2.2 Send Data

With this program point you can transfer the data from the personal computer to the feeding computer.

If, before "Send Data" no "Receive Data" or "Read Data <-- Disc" was carried out, you must confirm that the currently available data should be sent – thus the data on the feeding computer are overwritten.



If you wish to cancel this process, please press function key 2 YES in "Cancel".
If the entered data are correct, you can send them by pressing function key 2 YES "Send Data".



The data will be sent after the confirmation by pressing function key 2YES .

3.2.3 Receive Data

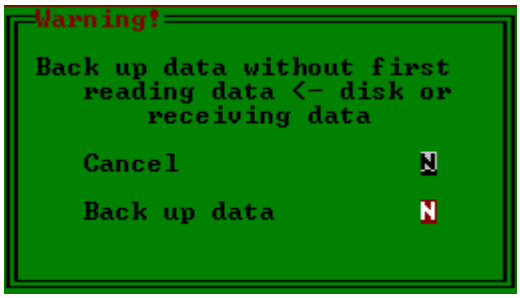
With this program point you can transfer data from the feeding computer to the personal computer.

The data transfer will be carried out after the confirmation by pressing function key 2 JA.

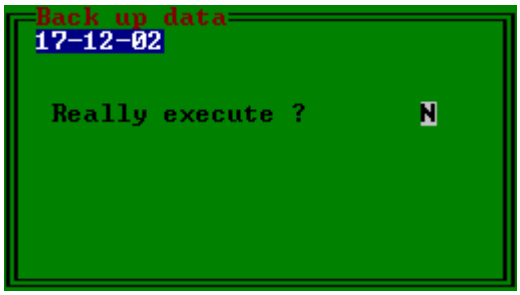
3.2.4 Save Data → Disc !

This program point enables you to save all data, which are currently saved in this program, on the hard disk of your PC. Please use a name of your own choice.

If, prior to "Save Data -->Disc !" no "Receive Data" or "Read Data <-- Disc" has been carried out, you have to confirm that the current data must be saved.



If you wish to cancel this process, please press function key 2 YES in "Cancel".
If the entered data are correct, you can save them by pressing function key 2 YES "Save Data".

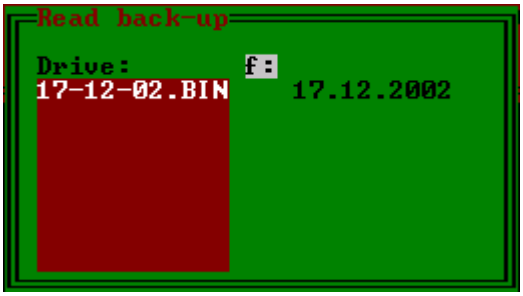


In “Drive” you can select the drive, onto which the saved copy should be stored. Do this by pressing function key 3 Change.
The data are saved after pressing function key 2 YES.

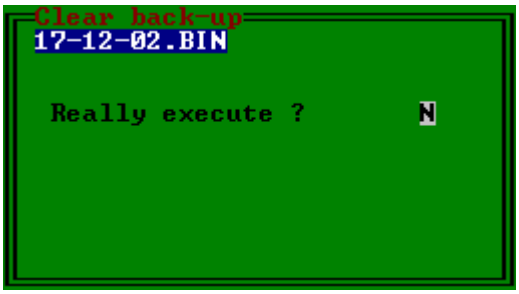
3.2.5 Read Data ← Disc !

With this program point you can load all data, which are saved in this program on your PC, into this program again.

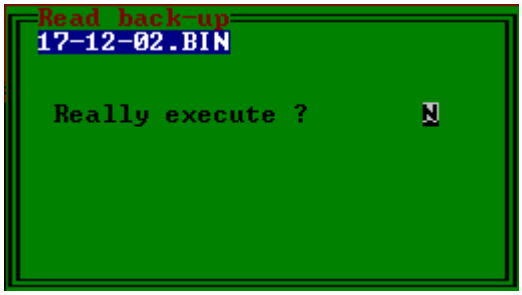
In “Drive” please use function key 3 **change** to choose the drive, from which the backup copy should be read.



By pressing function key 4 **delete** it is possible to delete a backup, which should be selected by the cursor. Confirm your input by pressing function key 2 **YES** and the backup will be deleted.



If you wish to read a backup, place the cursor at the appropriate position and confirm the selection with the ENTER-key.



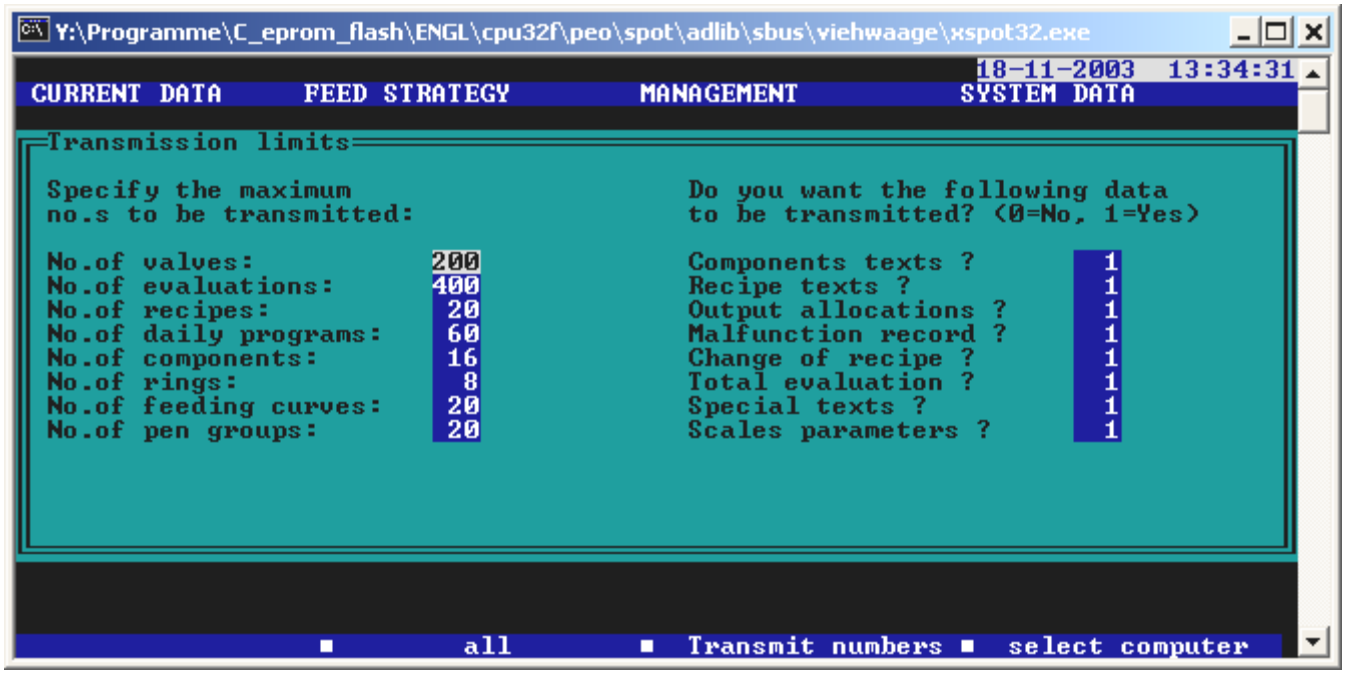
The reading process takes place after the confirmation by pressing function key 2 **YES**.

3.2.6 Transmission Limit

This program point enables to determine, which data you wish to transfer or save.
This program point has an effect on points "Send Data", "Receive Data" and "Save Data --> Disc", but not on "Read Data <-- Disc".
By pressing function key 2 **all**, all data are ready for transfer.

Function key 3 **Transmit numbers** is used for service purposes, in order to match the PC program with the program of the feeding computer for the transfer.

With function key 4 **select computer** you can determine, with which feeding computer the transfer should take place (only if several feeding computers are available).



3.2.7 Online-Transmission

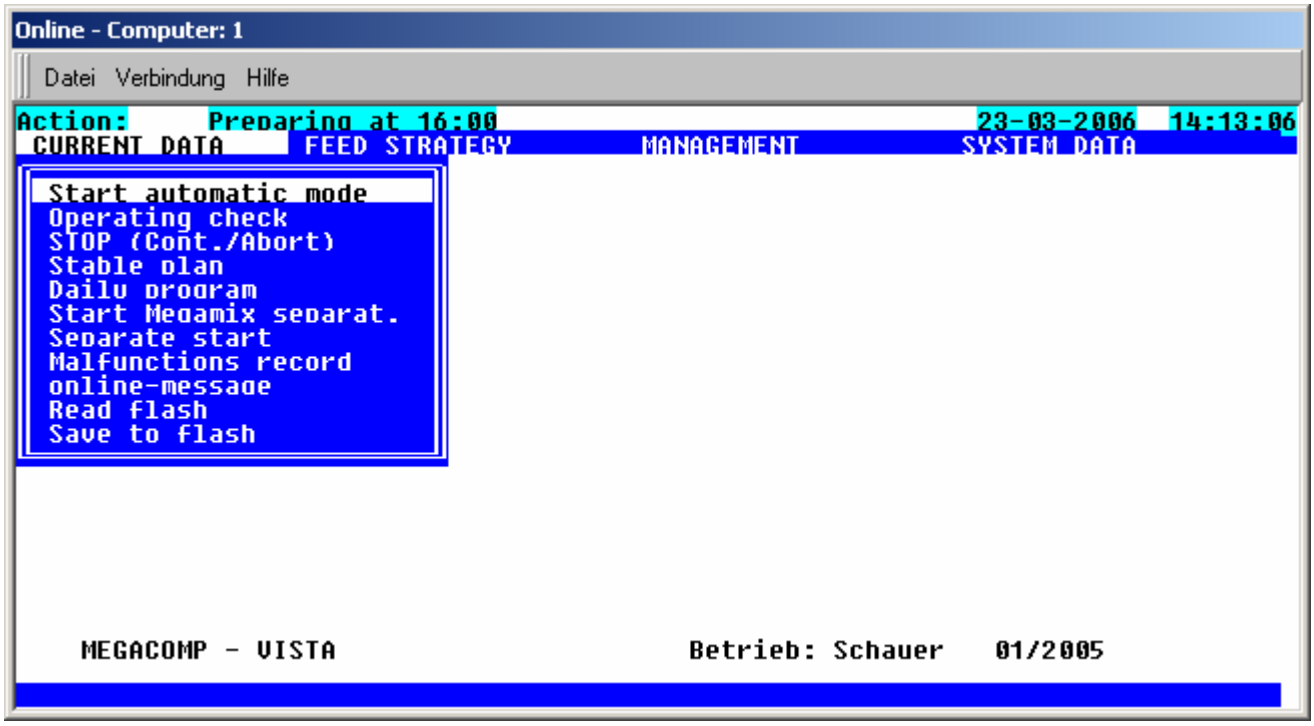
If you open this program point, the "Online Program" is called up (read “Online Program for PC”).

3.2.8 End of Program

If you select this program point with the cursor keys and if you confirm your choice with the ENTER-key, you will leave the program. Prior to this you are asked, whether you would like to save the changes, which have been made. If you press function key 2 **YES**, a backup is made as specified in "Save Data → Disc”.

3.3 Online Program for PC

With this program you can exchange data between the PC with “ONLINE” and the feeding computer. This means that you can carry out changes and put in data into the feeding computer via the PC. The screen display of the PC is identical to that of the feeding computer.



3.4 Option: Actuation of the MODE

For using a mode you have to additionally set the following initialization-file on your PC. Please set the file in the index, where your linking programs are.

- ***Mode.cfg*** **-** file for mode-initialization. This data file is dependent on the used mode. Compare the description of your mode. Some examples are given:
Init:AT&F&R1&H0&K0&D0S41.4=1S7=90L7 (Init Sequence, here ZyXEL-Mode)
Dial:ATDxxxx (xxxx telephone number)

Call up the Online.exe - program or the interface-program (e.g. FVAAD10.exe - program). With the "m" parameter you can activate the mode:
Activate the actuation of the mode: example: **0nline m**
FVAAD10 m

- Examples for Mode-Initialization:

* = standard setting
< = signal from mode to PC
> = signal from PC to mode

		US-Rob.	ZyXEL	CPV	Supra
	Turning off sending-control:	&H0	&H0	\Q0	&K0 >
	Turning off hardware-control (RTS):	&R1	&R1	&R1	---
	Turning off data compression:	&K0	&K0	%C0	%C0
	Interface speed variable:	&B0	&B0	\N	N0
	Local echo off:	E0	E0	E0	E0
*	Online echo off:	F1	---	---	---
>	Ignore Data Terminal Ready Signal. (DTR):	&D1	&D1	&D0	&D0
	Error-correction is switched off; normal mode:	&M0	---	---	&M0
<*#	Switch off software-control (CTS):	&I0	---		
<*#	Ignore Data Set Ready. (DSR always on):	&S0	&S0	&S0	
<#	Ignore carrier detect. DCD:	&C0	&C0	&C0	&C0

These settings are not necessary.

Init Sequence1 for CPU32:
US-Robotics 28800: AT&H0&R1&K0&B1E0&M0
ZyXEL U-1496E: AT&H0&R1&K0&B1E0
CPV 14400 (Vobis): AT&D0&S0&K0\N0E0&M0\Q0&R1
Elsa Micro link: AT&F&D0\Q0&S0\N0E0

Init Sequence1 for PC:
US-Robotics 28800: AT&F&R1&M0&H0&K0X3S7=90
ZyXEL U-1496E: AT&F&R1&H0&K0&D0S41.4=1S7=90L7
CPV 14400 (Vobis): AT&F\Q0&R1%C0\N&D0X3S7=90
Elsa Micro link: AT&F&D2\Q0%C0\N0X3S7=90

Init Sequence 2 for CPU32: ATS0=2

Settings of the Feeding Computer:

“Special Operating Parameter”:
“Parameter” 73: Parity must be set to 0 (no parity)
“Parameter” 74: Baud rate must be set; e.g. 9600 (standard setting)
“Parameter” 77: Mode must be set to “active” 1=active

Press function key 1 ("Mode") in program point "Special Operating Parameter":
You will find a program for setting the Mode Parameters and for the reset of the mode.
Init Sequences 1 and 2 have to be entered (consider the example on the previous page);
Init Sequence 1 is used for mode-modus;
Init Sequence 2 is used for the setting of auto-answer;
You can enter the following special signs:

& = enter **.** (dot), then press function key 2 eight times;
\ = enter Z, and then press function key 4 twice;

For activating the mode, you have to press function key 2 in the fourth line (the mode has to activate the AA-Led).