COMPUTER CONTROL SYSTEM
FOR

08039sz
SABIZ PLANT

Operator Manual

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IT – 10040, Gerbole di Volvera (TO)

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INDEX

GENERAL CONCEPTS

System architecture

The system architecture is Client/Server.

The Server application performs:
- I/O server (read and write from/to PLC and/or any field controller)
- DB server (data processing and storing)
- Printer server (data processing and report printing)
- Host data exchange and processing (interfacing with a Host System, if any, will always be done through the server application.

The Client application takes care of the user's interface.

All data are stored on all the server PCs.

When the Master Server Application crashes, control is taken by the Backup Server Application which has updated data on disk and which restores memory data by reading them from the PLC automatically.
No operation by the user is foreseen except what necessary for restoring the failed system.

The Client application can view and modify data and download recipes.

All the automatic reports foreseen are printed out on the color ink jet printer from the Server application.

The Server Application cannot be used as operator station for Process Control.

On PC1 and PC2 are present all the applications: Client and Server.
In the Windows desktop is present one icon for each application. The operator will start manually the applications by clicking the appropriate icon.

On PC3 and others PCs (if presents) only the client application is installed.
In the Windows desktop only 1 icon is present. The operator will start manually the application by clicking this icon.

The only restriction is given by Excel DDE link: in fact, on the same computer, only an application is able to work with it.
So you can work with several client application on every PC but only the first started one can use Excel link.

STARTUP PROCEDURE

1) Checking that PLC is ON and in RUN.
2) Checking that all LAN cables are connected and the Ethernet SWITCH powered.
3) Checking that the Color printer on network is present and switched on
4) Start the PC with **MASTER Server** Application (last running e.g.: PC1) and when all the applications are running (autorun) start the PC with **BACKUP Server**.
5) Start all others PCs (if presents) with the client application

SHUTDOWN PROCEDURE

Only ADMINISTRATOR can turn off the computer.

Never turn off the computer without having carried out the shutdown procedure.

1) Close Logoview Client application by clicking ALT-F4 (necessary to login as ADMINISTRATOR)
2) Close Logoview Server application by clicking ALT-F4 (necessary to login as ADMINISTRATOR)
3) Click shutdown button of Windows. Wait for the message of Windows XP that allows you to turn off the computer
4) Repeat the shutdown procedure (point 1,2 and 3) for all the PC.

Network files/database management

All Logoview internal database (analog channel data, loop data, data necessary to production report and received from the recipes in use) are aligned in network.

When a client application modifies some of these data, the master server application on the one PC will upgrade himself, and then will upgrade also the backup server applications on the other PC.

All function/data relating to the alarm management (acknowledgement, enable/disable, thresholds, descriptions) are aligned in network too.

Recipe files (Excel file) are also upgraded by server applications.

OPERATOR INTERFACE

System functions

In this specific job, Logoview NT supervisor system includes 2 Personal Computers and a PLC, performing command functions, monitoring and plant reporting, included in a Client/Server architecture.

PC1 and PC2 are connected via Local Area Network with a PLC by means of 10/100 Mbps Ethernet Network Interface Card.

PC1 and PC2 is also directly connected via Local Area Network with Gigabit Ethernet Network Interface Card. This Subnet is used only for Master-Backup Server synchronization.

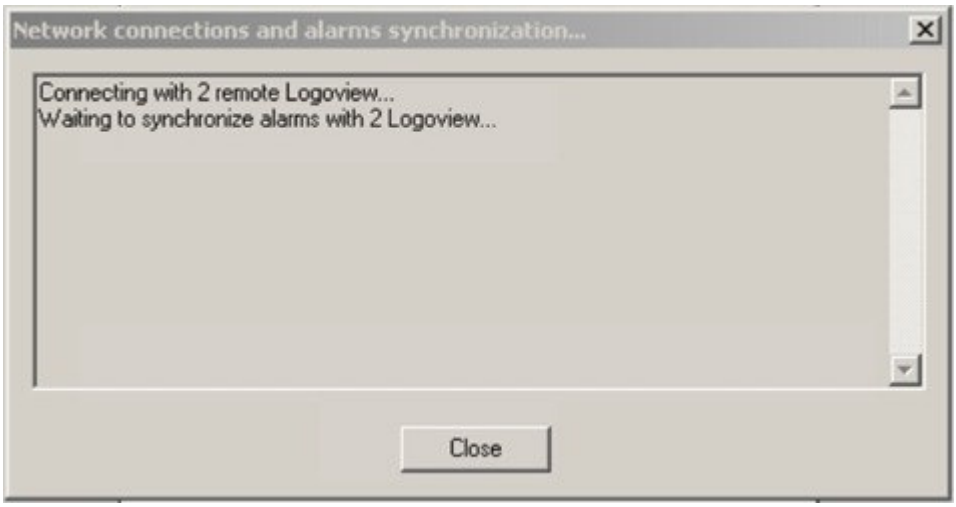
Main functions assigned to PLC level are:
- digital signals acquisition
- analog channels acquisition
- management command/state for motors, valves
- direct control of PID regulation loops
- current alarms management
- management of sequences to start/stop production.
- production control according to actual recipe
- communication to upper level (PC) of information for monitoring and
- plant control

Main functions of Logoview NT system are:
- plant supervision
- manual commands
- regulation loops
- current alarms management
- alarm historical archives
- trends (actual and historical)
- recipes management
- plant parameters management
- production reports
- alarms logging

Describing the Logoview application it's necessary to divide the manual in two section. The **SERVER application** manages the communication with the PLC and the **CLIENT application** supply the operator interface for driving the plant.

SERVER APPLICATION

Starting the Client application, at the end of the system initialization, the following window is shown:

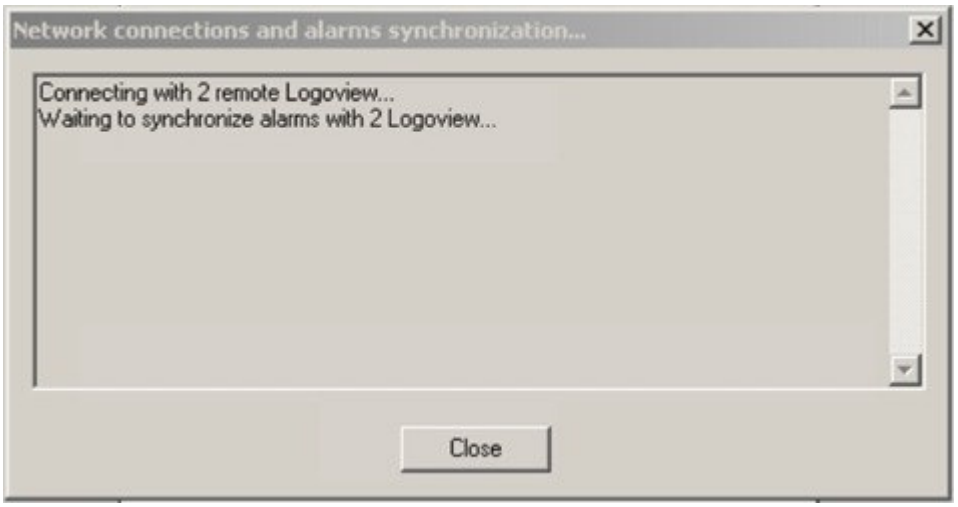


This window displays the status of synchronizations with others applications. Also if the window is closed before the end of all the checks, the process will be anyway completed.

When the Server application starts, it waits the connection with each client, so the synchronization will be performed with the Start of Client application.

CLIENT APPLICATION

Starting the Client application, at the end of the system initialization, the following window is shown:

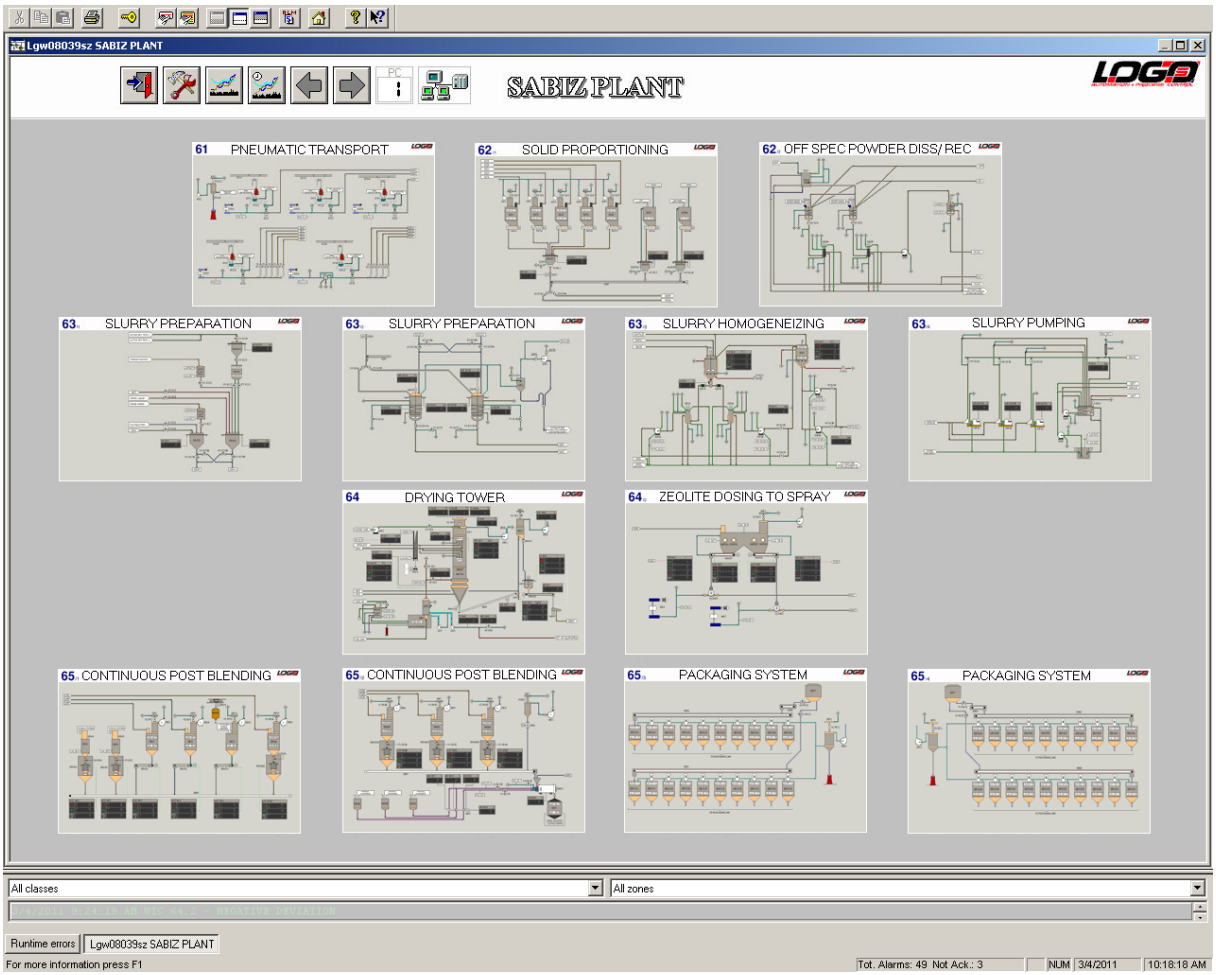


The alarm synchronization in the network is essential for the system; therefore it is important the complete success of all connections and synchronizations with the active Servers.

At the end of connection with all Logoview (Client and Server) this windows is automatically closed.

In the system initialization all data contained in configuration Data Base are loaded in memory to improve system performances during normal work.

After the initialization, the main menu will be displayed:



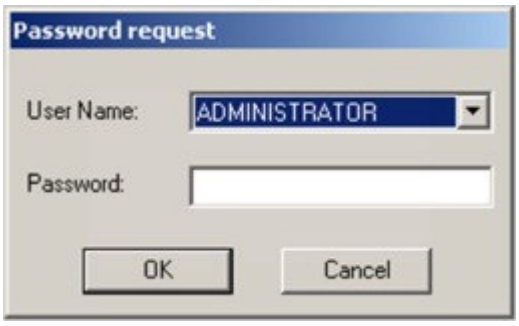
At the left top of the page the number of PC (1, 2, 3, …) is always indicated.

The operator can recall one of the sections in which the plant is divided, striking the associated key in the Main menu.

PASSWORD MANAGEMENT

The password management will be based on the “logging” concept of “User”.

Before working on the system it is necessary to login.
To call this function, push the button in the toolbar, and the following window is displayed:



Four levels of “User” have been foreseen, the **OPERATOR**, the **TECHNICIAN,** the **ENGINEER**, and the **ADMINISTRATOR.**

OPERATOR level is password free, and is not necessary the “login”.
Following functions are enabled:

- Motor start/stop/reset
- Valve open/close/reset
- Set single analog output
- Change SP, output, manual/automatic/cascade for PID regulation
- Regulation trend
- Real time trends
- Historical trends
- Real time alarms visualization and acknowledgement
- Historical alarms
- Plant report request
- View totalizers

TECHNICIAN User, after the “login” with password, will have following functions enabled:

- All OPERATOR functions
- Regulation setup
- Direct/Inverse command for PID regulation
- Alarms configuration
- Plant parameters configuration
- Raw material definition
- Recipe configuration
- Sequence commands
- Reset totalizers

ENGINEER User, after “login” with password, will be enabled to following functions:

- All TECHNICIAN functions
- Analogical Input/Output configuration
- Regulation configuration

Login as ADMINISTRATOR User, will enable the complete management of the system.
In addition he will have the capability to close Client and Server Application and the access to the Windows Operating System

The ADMINISTRATOR can refer also to the additional: “System Administrator Manual”.

SECTIONS MONITORING

Each monitoring page related to a plant section, presents in a schematic way all the elements controlled by PLC (motors, valves, etc.).

Graphic representation of the state is made with different colors on the symbols of each element.

The colors of different elements on a video page are as follows:

Motors

WHITE	stopped
GREEN	started or started at low speed
HEAVENLY	started at high speed
FLASHING RED	alarm
LOCK SYMBOL	interlocked

Valves

WHITE	closed
FLASHING GREEN	moving
GREEN	opened
FLASHING RED	alarm
LOCK SYMBOL	interlocked

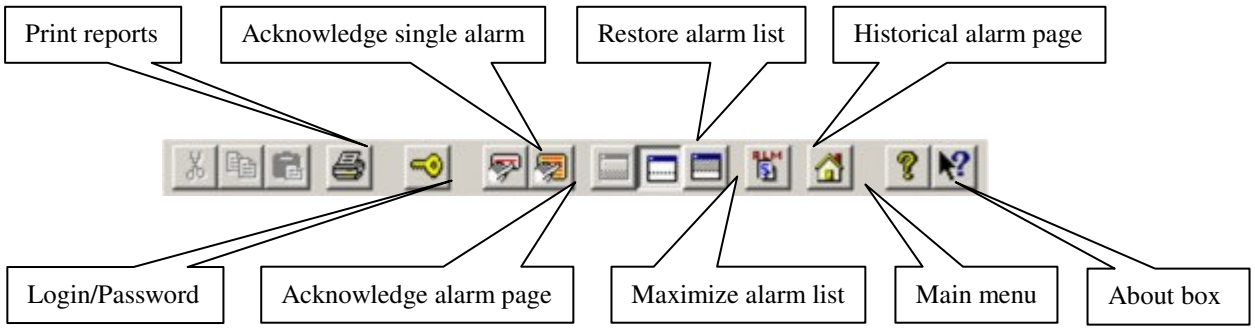
Moreover, the video displays all the analog values, the state of digital alarms and main parameters, related to regulation loop (tag, state, set-point, process value, etc.)

Analog values

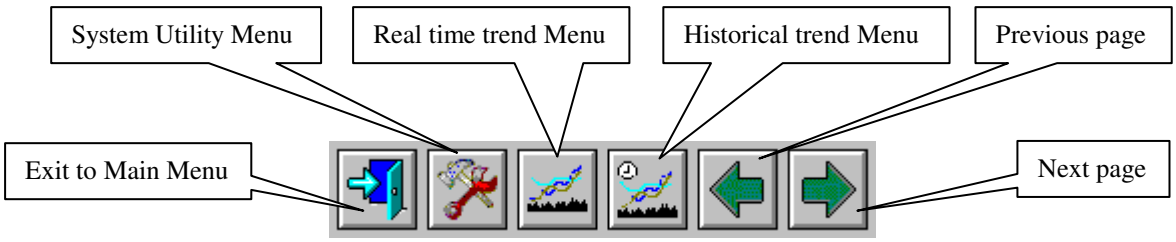
The analog value is displayed in real time with its measure unit and actual alarm state:

GREY	value within limits
FLASHING RED	unacknowledged alarm
RED	acknowledged alarm

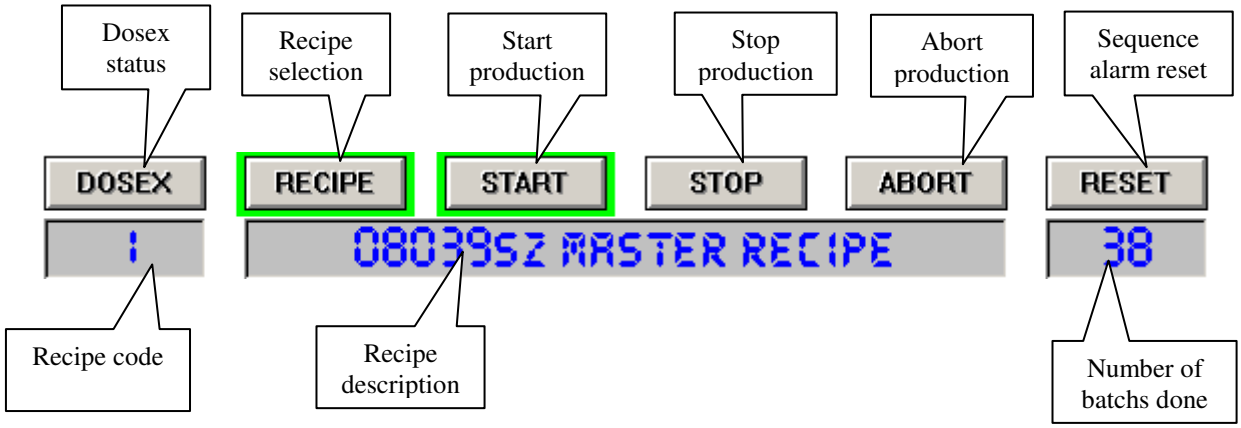
From the toolbar on the top of video page, the following general choices are possible:



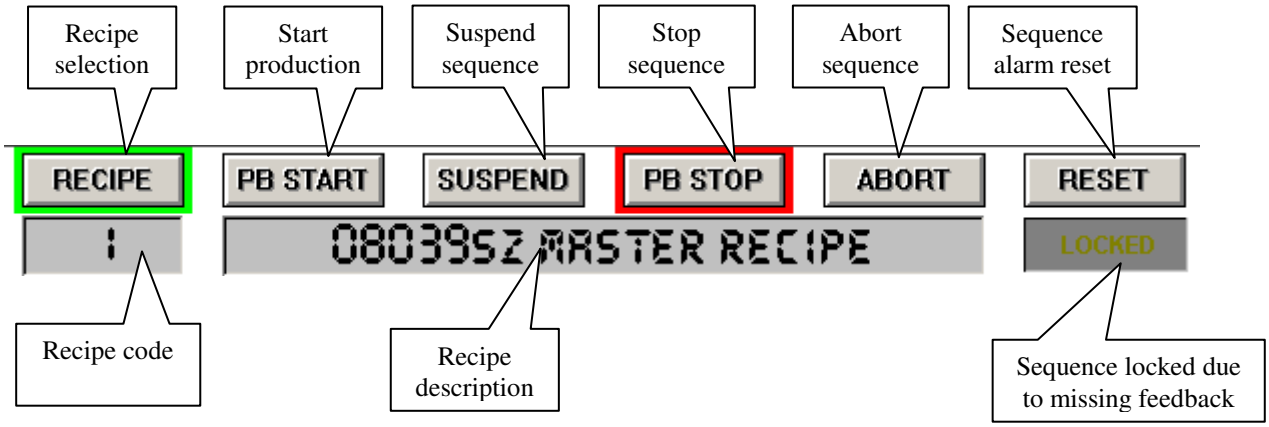
From each section video page, the following general choices are possible:



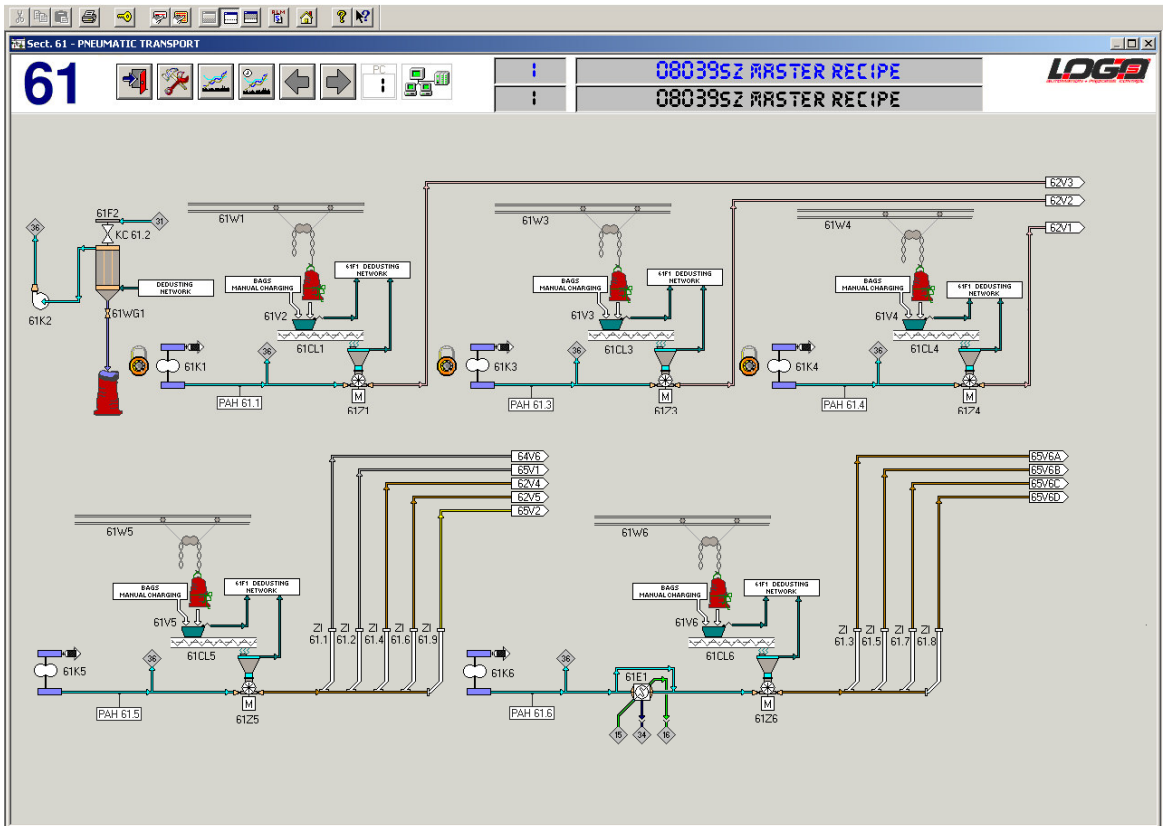
Dosex toolbar

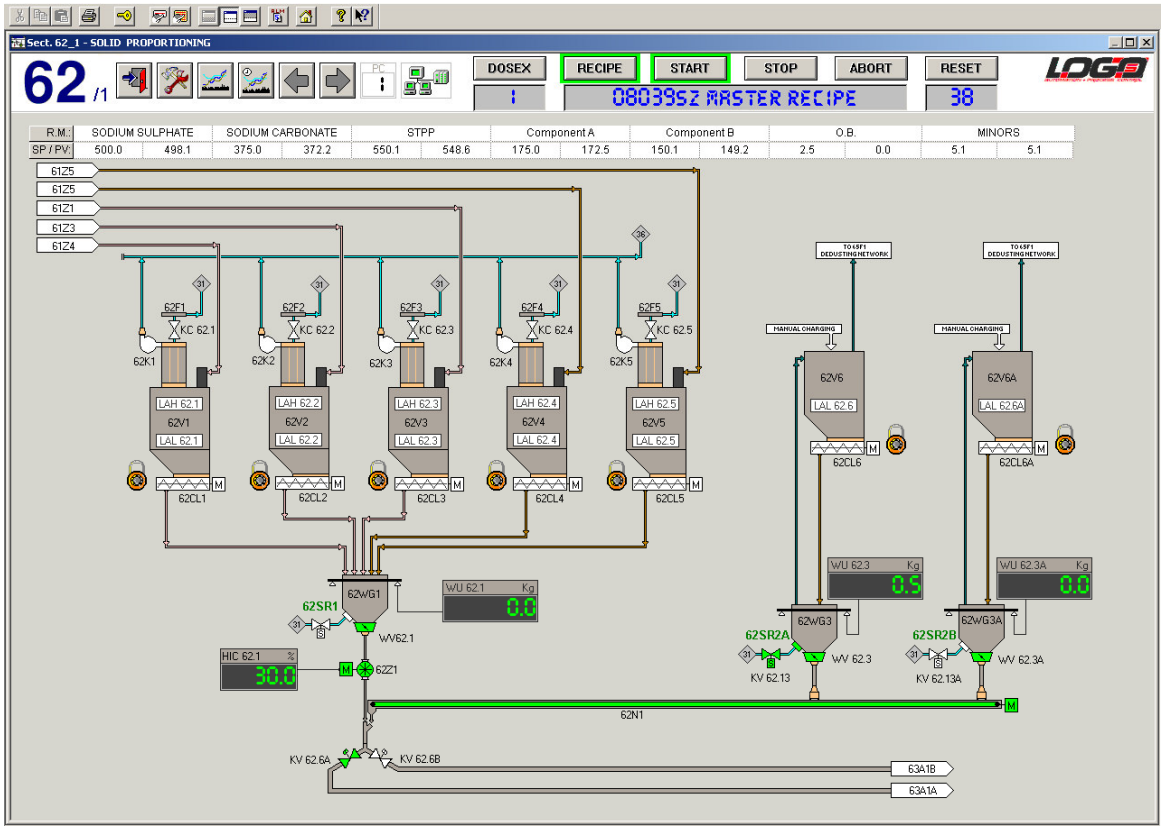


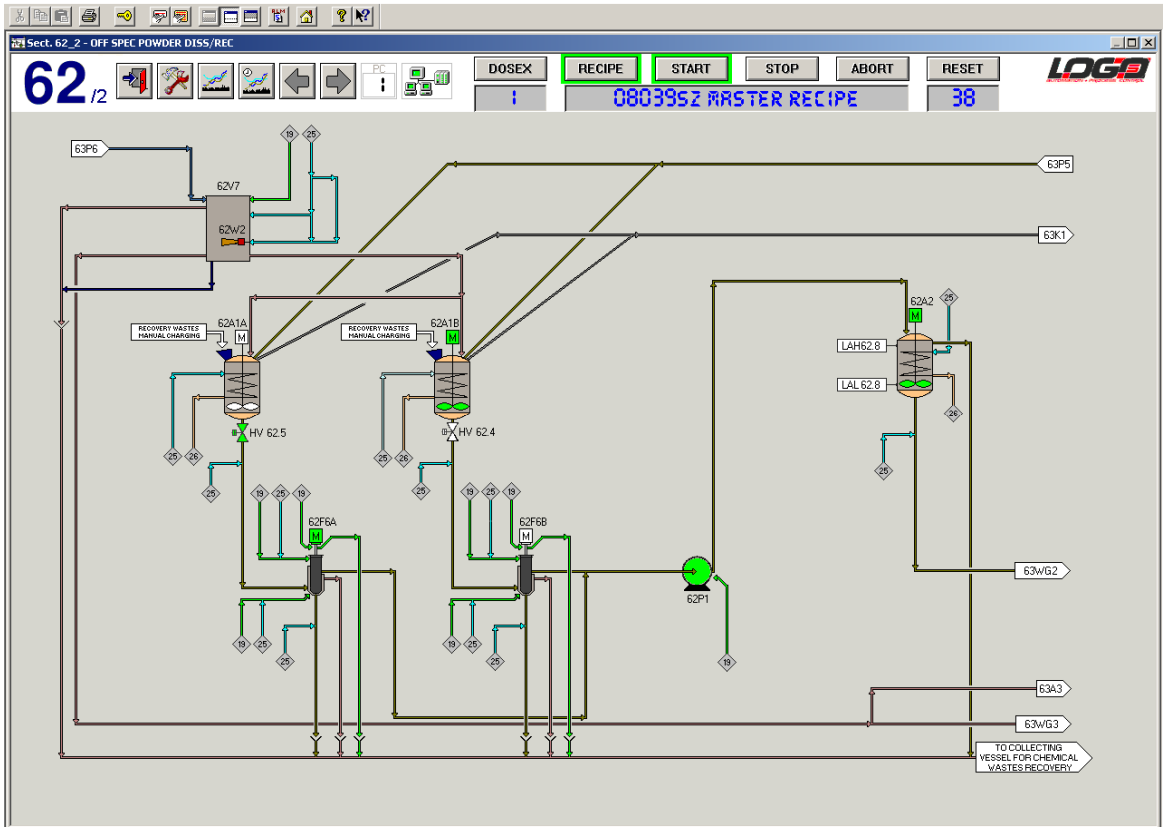
Post blending toolbar

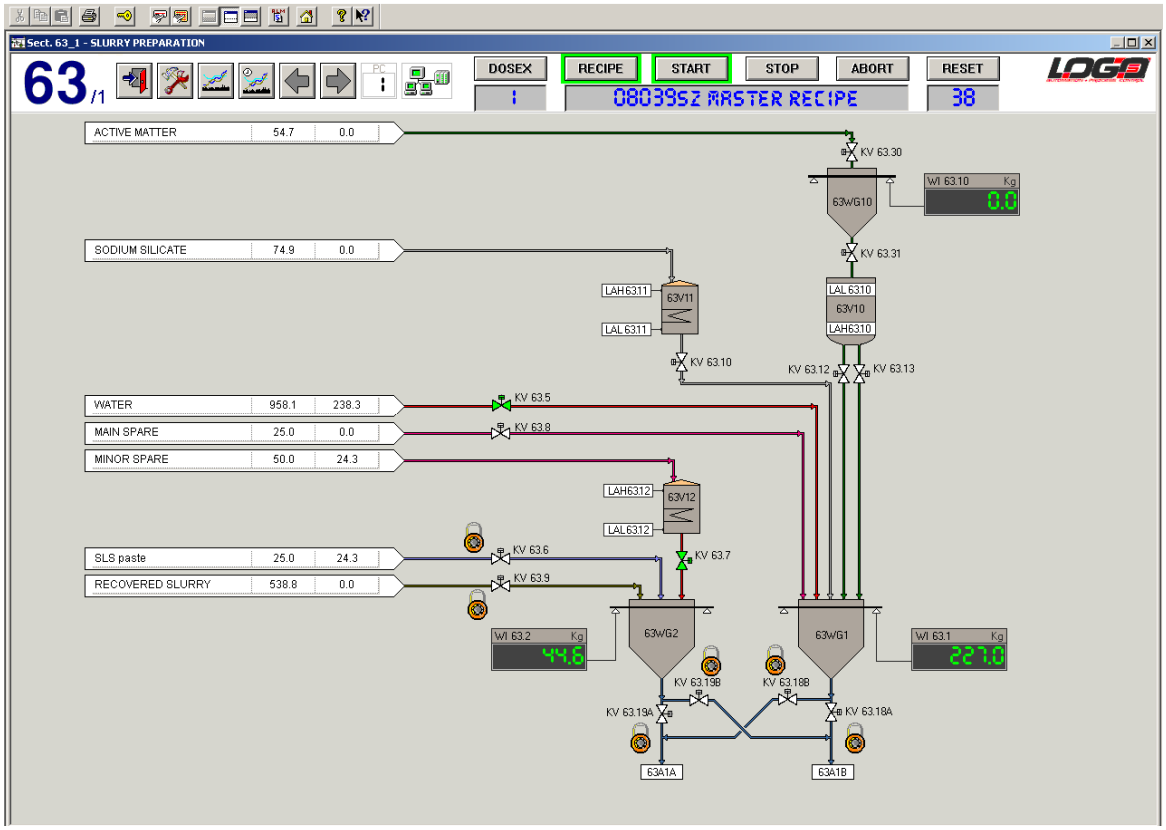


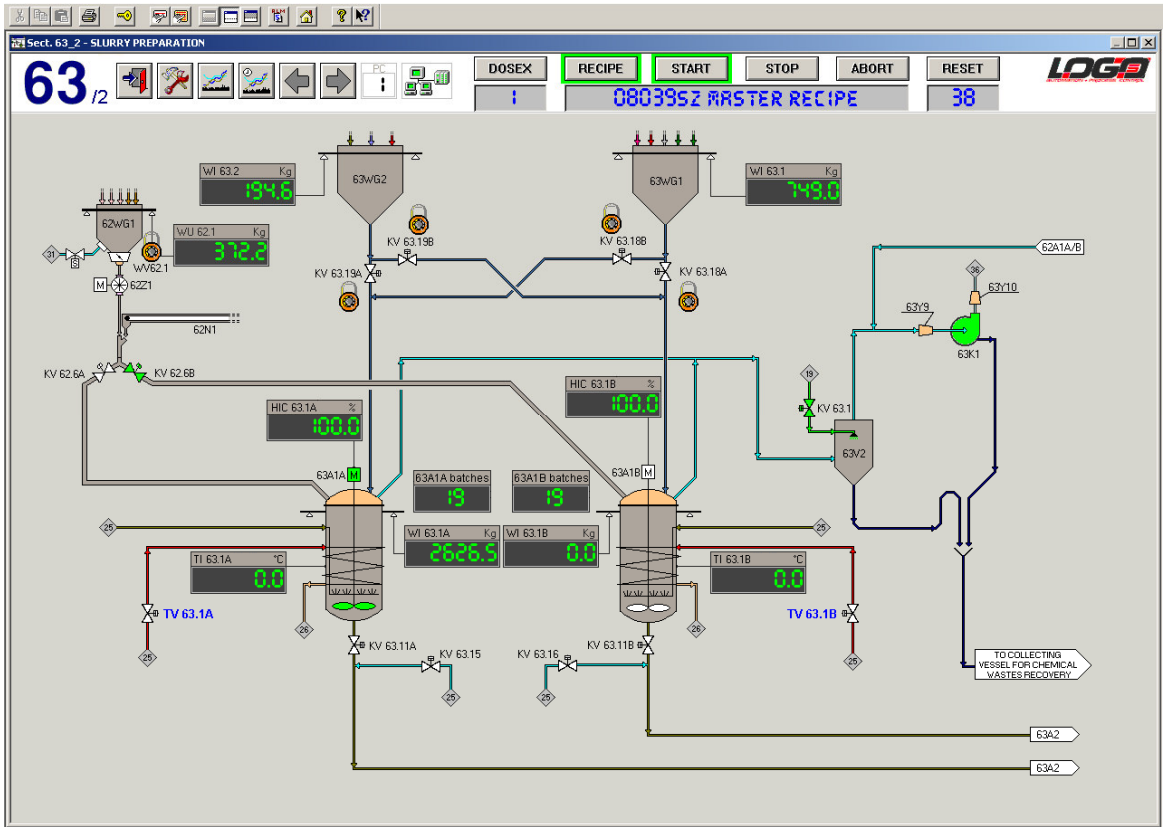
Section layouts

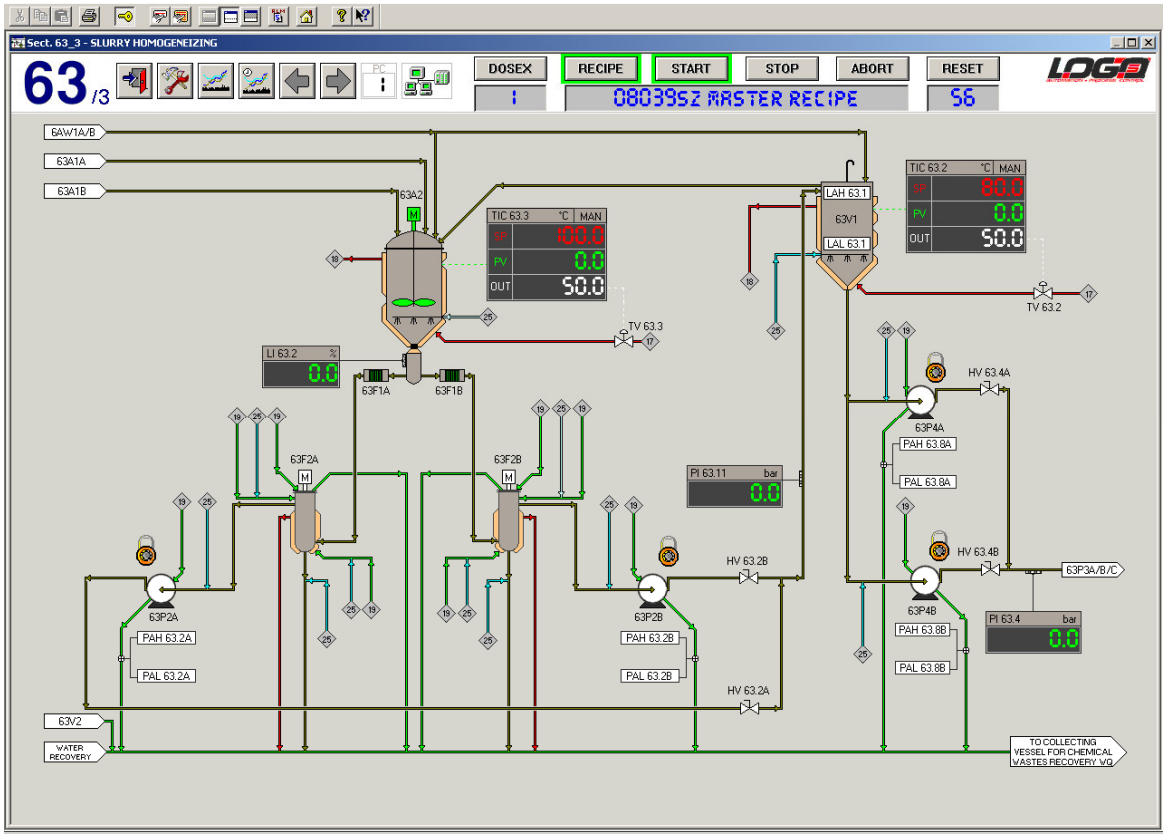


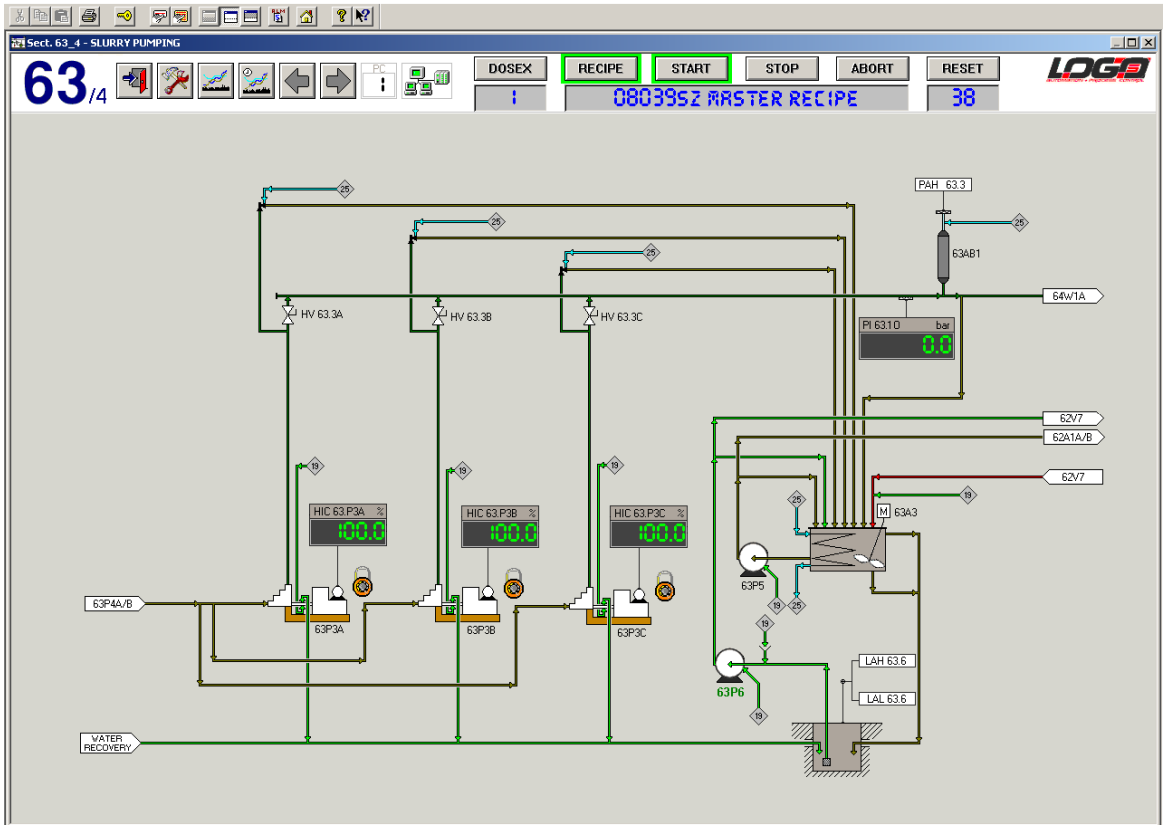

Sect. 62_1 - SOLID PROPORTIONING
62 /1
DOSEX
RECIPE
START
STOP
ABORT
RESET
08039SZ MASTER RECIPE
38
R.M.:
SODIUM SULPHATE
SODIUM CARBONATE
STPP
Component A
Component B
O.B.
MINORS
SP / PV:
500.0
498.1
375.0
372.2
550.1
548.6
175.0
172.5
150.1
149.2
2.5
0.0
5.1
5.1
61Z5
61Z5
61Z1
61Z3
61Z4
62F1
62F2
62F3
62F4
62F5
KC 62.1
KC 62.2
KC 62.3
KC 62.4
KC 62.5
62K1
62K2
62K3
62K4
62K5
LAH 62.1
62V1
LAL 62.1
LAH 62.2
62V2
LAL 62.2
LAH 62.3
62V3
LAL 62.3
LAH 62.4
62V4
LAL 62.4
LAH 62.5
62V5
LAL 62.5
62CL1
62CL2
62CL3
62CL4
62CL5
MANUAL CHARGING
62V6
LAL 62.6
62CL6
62V6A
LAL 62.6A
62CL6A
WU 62.3
Kg
0.5
WU 62.3A
0.0
62WG3
62WG3A
62SR2A
62SR2B
WV 62.3
WV 62.3A
KV 62.13
KV 62.13A
62WG1
62SR1
WU 62.1
0.0
WV62.1
HIC 62.1
30.0
62Z1
62N1
KV 62.6A
KV 62.6B
63A1B
63A1A

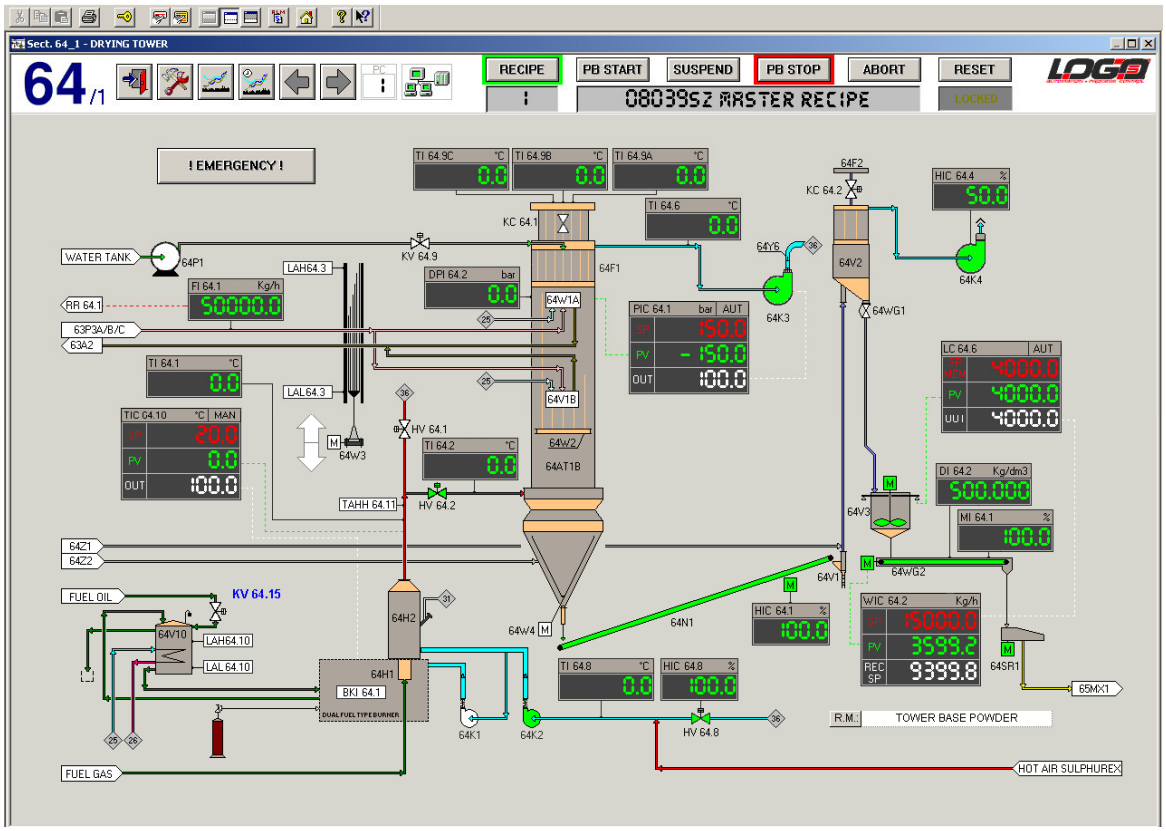

Sect. 62_2 - OFF SPEC POWDER DISS/REC
62 /2
DOSEX
RECIPE
START
STOP
ABORT
RESET
08039SZ MASTER RECIPE
38
63P6
63P5
63K1
62V7
62W2
RECOVERY WASTES MANUAL CHARGING
62A1A
62A1B
HV 62.5
HV 62.4
62A2
LAH62.8
LAL 62.8
62F6A
62F6B
62P1
63WG2
63A3
63WG3
TO COLLECTING VESSEL FOR CHEMICAL WASTES RECOVERY

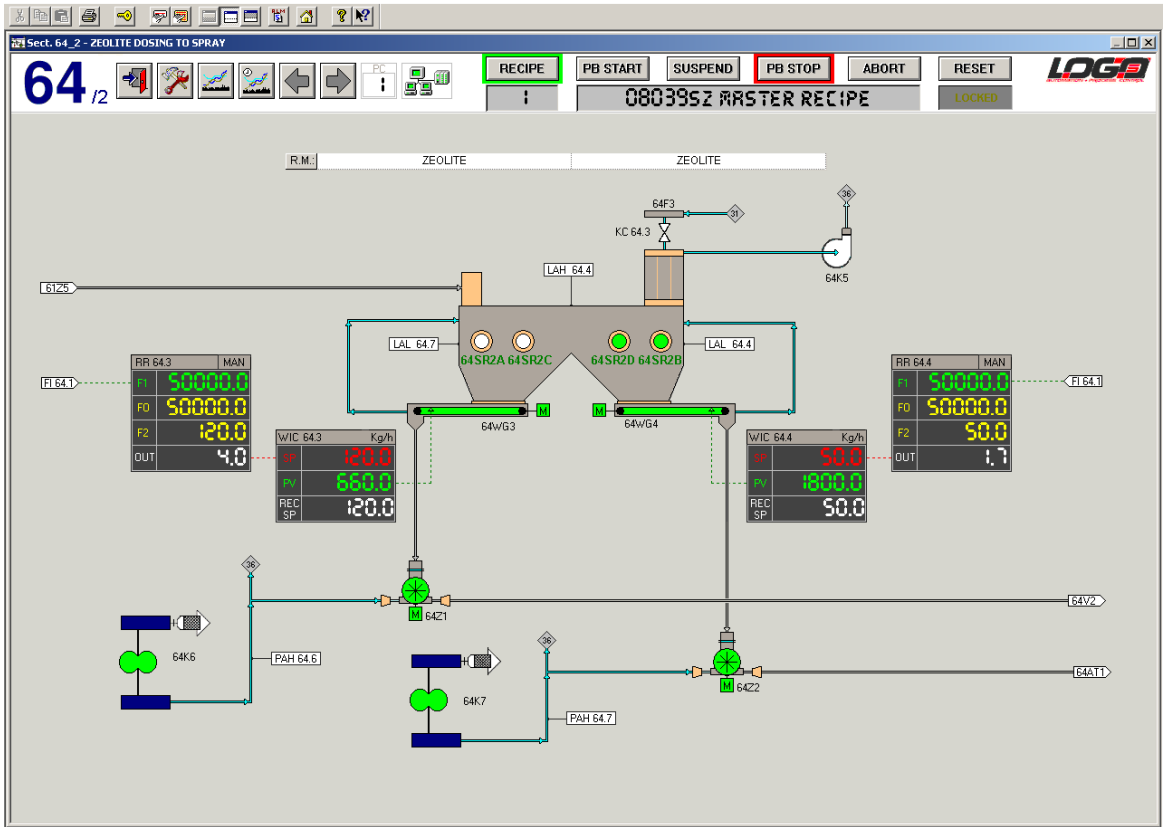

Sect. 63_1 - SLURRY PREPARATION
63 /1
DOSEX
RECIPE
START
STOP
ABORT
RESET
1
08039SZ MASTER RECIPE
38
ACTIVE MATTER 54.7 0.0
SODIUM SILICATE 74.9 0.0
WATER 958.1 238.3
MAIN SPARE 25.0 0.0
MINOR SPARE 50.0 24.3
SLS paste 25.0 24.3
RECOVERED SLURRY 538.8 0.0
KV 63.30
KV 63.31
KV 63.10
KV 63.12
KV 63.13
KV 63.5
KV 63.8
KV 63.6
KV 63.9
KV 63.7
KV 63.19B
KV 63.18B
KV 63.19A
KV 63.18A
63WG10
63WG2
63WG1
63V11
63V10
63V12
WI 63.10 Kg 0.0
WI 63.2 Kg 44.6
WI 63.1 Kg 227.0
LAH6311
LAL 6311
LAL 6310
LAH6310
LAH6312
LAL 6312
63A1A
63A1B

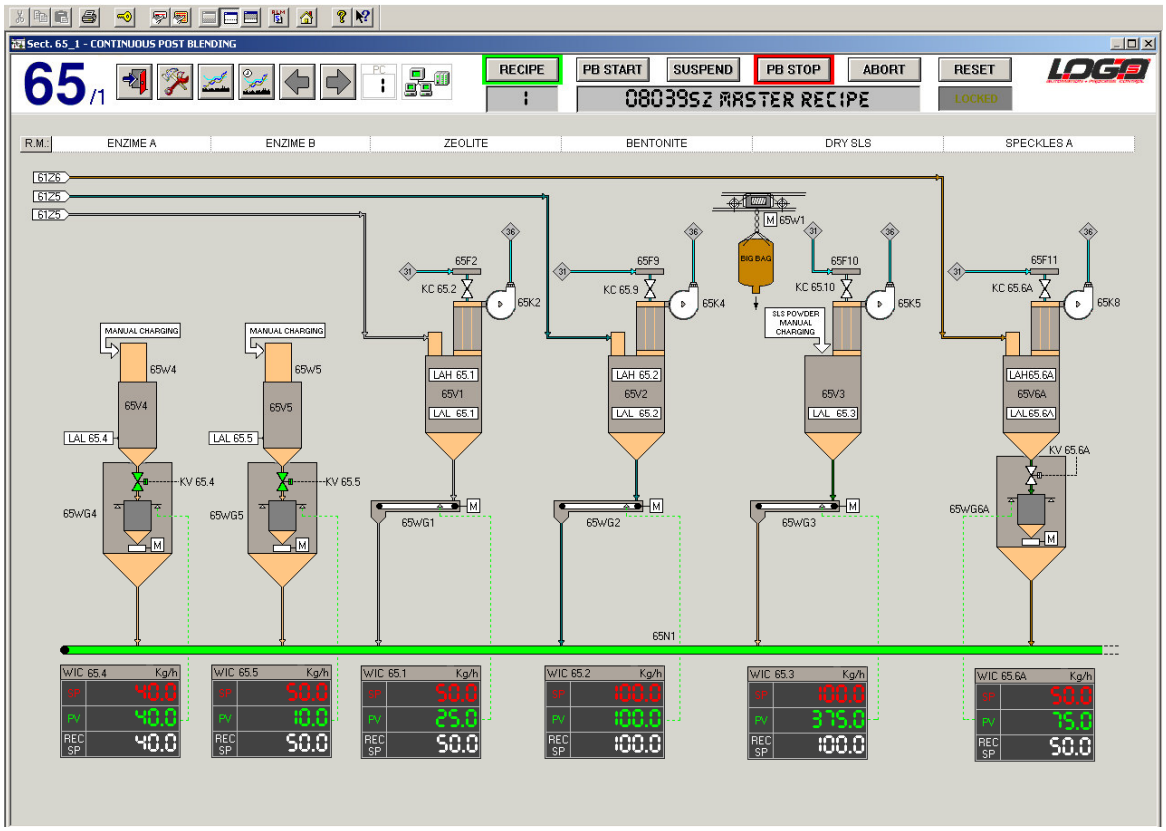

Sect. 63_2 - SLURRY PREPARATION
63 /2
DOSEX
RECIPE
START
STOP
ABORT
RESET
1
08039SZ MASTER RECIPE
38
WI 63.2 Kg 194.6
WI 63.1 Kg 748.0
WU 62.1 Kg 372.2
62WG1
63WG2
63WG1
WV62.1
62Z1
62N1
KV 62.6A
KV 62.6B
KV 63.19B
KV 63.18B
KV 63.19A
KV 63.18A
HIC 63.1A % 100.0
HIC 63.1B % 100.0
63A1A
63A1B
63A1A batches 19
63A1B batches 19
WI 63.1A Kg 2626.5
WI 63.1B Kg 0.0
TI 63.1A °C 0.0
TI 63.1B °C 0.0
TV 63.1A
TV 63.1B
KV 63.11A
KV 63.15
KV 63.16
KV 63.11B
KV 63.1
63V2
63K1
63Y9
63Y10
62A1A/B
TO COLLECTING VESSEL FOR CHEMICAL WASTES RECOVERY
63A2
63A2

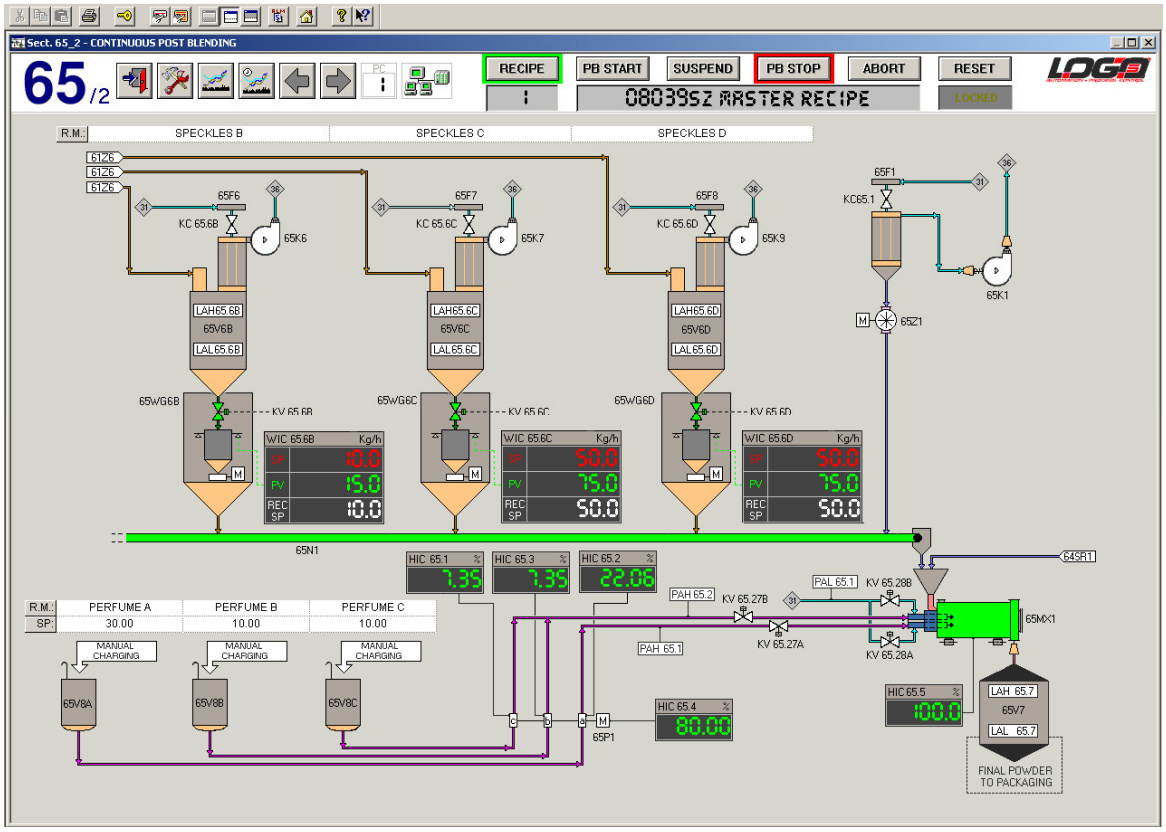

Sect. 63_3 - SLURRY HOMOGENEIZING
63/3
DOSEX
RECIPE
START
STOP
ABORT
RESET
08039SZ MASTER RECIPE
56
6AW1A/B
63A1A
63A1B
63A2
TIC 63.3
MAN
100.0
0.0
50.0
LAH 63.1
63V1
LAL 63.1
TIC 63.2
80.0
0.0
50.0
TV 63.2
TV 63.3
LI 63.2
63F1A
63F1B
63F2A
63F2B
HV 63.4A
63P4A
PAH 63.8A
PAL 63.8A
PI 63.11
HV 63.2B
HV 63.4B
63P3A/B/C
63P2A
PAH 63.2A
PAL 63.2A
63P2B
PAH 63.2B
PAL 63.2B
63P4B
PAH 63.8B
PAL 63.8B
PI 63.4
HV 63.2A
63V2
WATER RECOVERY
TO COLLECTING VESSEL FOR CHEMICAL WASTES RECOVERY VG

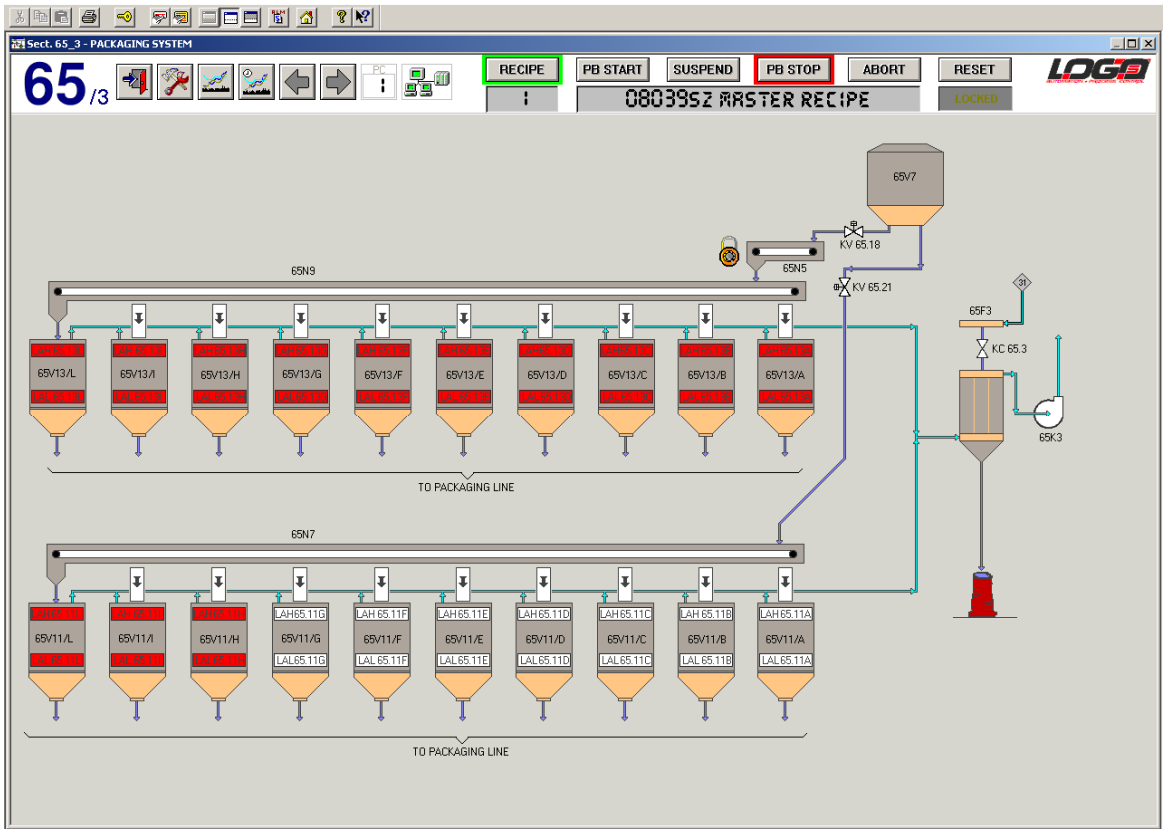

Sect. 63_4 - SLURRY PUMPING
63/4
DOSEX
RECIPE
START
STOP
ABORT
RESET
08039SZ MASTER RECIPE
38
PAH 63.3
63AB1
64W1A
HV 63.3A
HV 63.3B
HV 63.3C
PI 63.10
62V7
62A1A/B
HIC 63.P3A
HIC 63.P3B
HIC 63.P3C
100.0
63A3
63P5
63P4A/B
63P3A
63P3B
63P3C
63P6
LAH 63.6
LAL 63.6
WATER RECOVERY

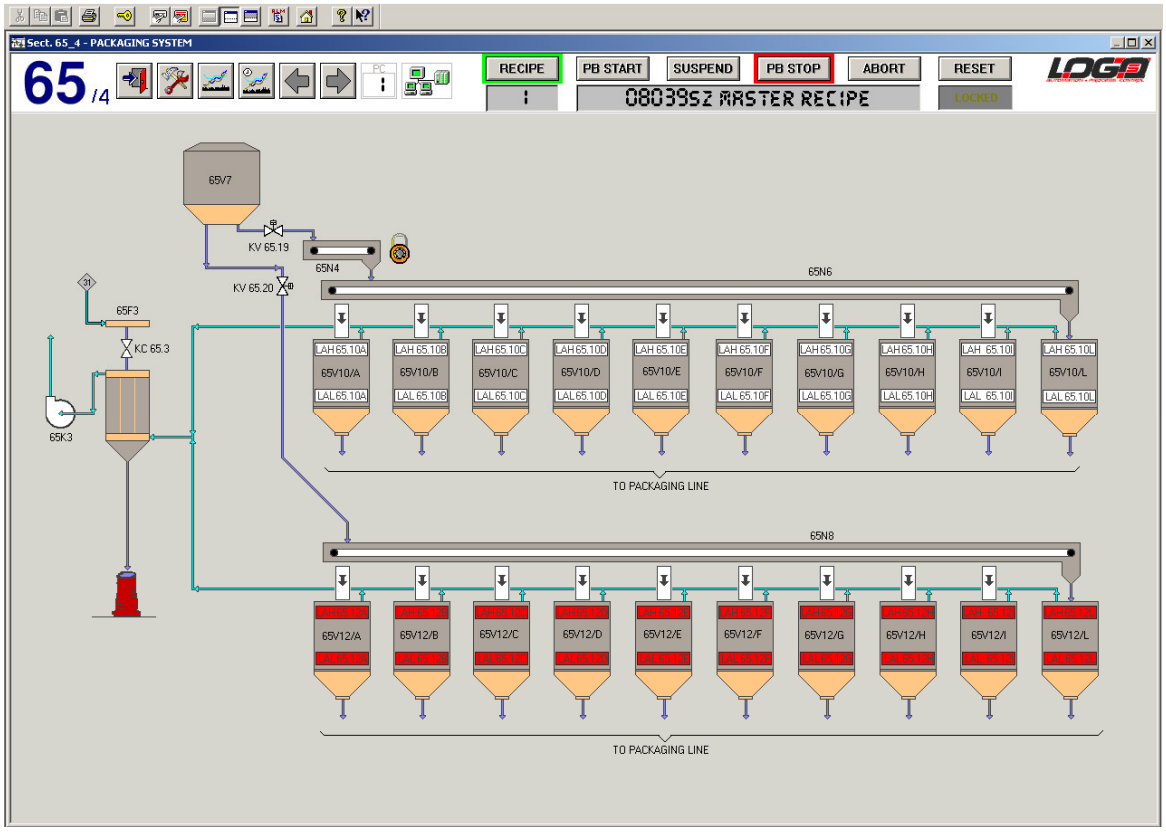

Sect. 64_1 - DRYING TOWER
64 /1
RECIPE
PB START
SUSPEND
PB STOP
ABORT
RESET
08039SZ MASTER RECIPE
! EMERGENCY !
WATER TANK
64P1
KV 64.9
KC 64.1
64F1
64F2
KC 64.2
64V2
64K4
64K3
64Y6
64WG1
64W1A
64V1B
64W2
64AT1B
64W3
64V3
64WG2
64V1
64N1
64W4
64H2
64H1
BKI 64.1
64K1
64K2
HV 64.8
HV 64.2
HV 64.1
KV 64.15
64V10
FUEL OIL
FUEL GAS
64Z1
64Z2
65MX1
HOT AIR SULPHUREX
R.M.: TOWER BASE POWDER
TI 64.9C
TI 64.9B
TI 64.9A
TI 64.6
HIC 64.4
FI 64.1
RR 64.1
63P3A/B/C
63A2
DPI 64.2
PIC 64.1
LC 64.6
TI 64.1
LAL64.3
LAH64.3
TIC 64.10
TI 64.2
TAHH 64.11
DI 64.2
MI 64.1
HIC 64.1
WIC 64.2
64SR1
TI 64.8
HIC 64.8
LAH64.10
LAL 64.10


Sect. 64_2 - ZEOLITE DOSING TO SPRAY
64 /2
RECIPE
PB START
SUSPEND
PB STOP
ABORT
RESET
08039SZ MASTER RECIPE
R.M.: ZEOLITE ZEOLITE
64F3
KC 64.3
64K5
61Z5
LAH 64.4
LAL 64.7
LAL 64.4
64SR2A 64SR2C
64SR2D 64SR2B
64WG3
64WG4
RR 64.3
RR 64.4
FI 64.1
WIC 64.3
WIC 64.4
64K6
64K7
64Z1
64Z2
PAH 64.6
PAH 64.7
64V2
64AT1


Sect. 65_1 - CONTINUOUS POST BLENDING
65/1
RECIPE
PB START
SUSPEND
PB STOP
ABORT
RESET
08039SZ MASTER RECIPE
LOCKED
R.M.:
ENZIME A
ENZIME B
ZEOLITE
BENTONITE
DRY SLS
SPECKLES A
MANUAL CHARGING
LAH 65.1
LAL 65.1
LAH 65.2
LAL 65.2
LAL 65.3
LAH65.6A
LAL65.6A
LAL 65.4
LAL 65.5
KV 65.4
KV 65.5
KV 65.6A
65N1
WIC 65.4 Kg/h
WIC 65.5 Kg/h
WIC 65.1 Kg/h
WIC 65.2 Kg/h
WIC 65.3 Kg/h
WIC 65.6A Kg/h


Sect. 65_2 - CONTINUOUS POST BLENDING
65/2
RECIPE
PB START
SUSPEND
PB STOP
ABORT
RESET
08039SZ MASTER RECIPE
LOCKED
R.M.:
SPECKLES B
SPECKLES C
SPECKLES D
LAH65.6B
LAL65.6B
LAH65.6C
LAL65.6C
LAH65.6D
LAL65.6D
KV 65.6B
KV 65.6C
KV 65.6D
65N1
WIC 65.6B Kg/h
WIC 65.6C Kg/h
WIC 65.6D Kg/h
HIC 65.1
HIC 65.3
HIC 65.2
R.M.:
PERFUME A
PERFUME B
PERFUME C
SP:
30.00
10.00
10.00
MANUAL CHARGING
PAH 65.2
PAH 65.1
KV 65.27B
KV 65.27A
KV 65.28B
KV 65.28A
PAL 65.1
HIC 65.4
HIC 65.5
LAH 65.7
LAL 65.7
FINAL POWDER TO PACKAGING


Sect. 65_3 - PACKAGING SYSTEM
65 /3
RECIPE
PB START
SUSPEND
PB STOP
ABORT
RESET
08039SZ MASTER RECIPE
LOCKED
65V7
KV 65.18
65N5
KV 65.21
65N9
65F3
KC 65.3
65K3
65V13/L
65V13/I
65V13/H
65V13/G
65V13/F
65V13/E
65V13/D
65V13/C
65V13/B
65V13/A
TO PACKAGING LINE
65N7
65V11/L
65V11/I
65V11/H
65V11/G
65V11/F
65V11/E
65V11/D
65V11/C
65V11/B
65V11/A
TO PACKAGING LINE


Sect. 65_4 - PACKAGING SYSTEM
65 /4
RECIPE
PB START
SUSPEND
PB STOP
ABORT
RESET
08039SZ MASTER RECIPE
LOCKED
65V7
KV 65.19
65N4
KV 65.20
65N6
65F3
KC 65.3
65K3
65V10/A
65V10/B
65V10/C
65V10/D
65V10/E
65V10/F
65V10/G
65V10/H
65V10/I
65V10/L
TO PACKAGING LINE
65N8
65V12/A
65V12/B
65V12/C
65V12/D
65V12/E
65V12/F
65V12/G
65V12/H
65V12/I
65V12/L
TO PACKAGING LINE

MANUAL COMMANDS

Manual commands management pop-up menu, can be opened positioning the mouse pointer on the selected item (motor, valve, pid…) and pressing the RIGHT button.
Once the command list is opened, the command choice is performed with the LEFT button of the mouse.

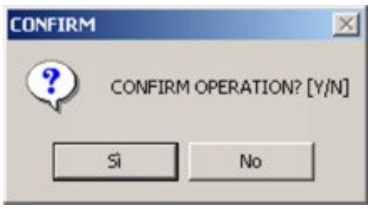
Following pictures show an example of the different types of windows for a valve and a motor.

And for a PID regulator:

Command description:

OPEN → valve opening
CLOSE → valve closing
START → motor start
STOP → motor stop
RESET → alarm reset
MANUAL → set regulation in manual mode
AUTOMATIC → set regulation in automatic mode
CASCADE → set regulation in cascade mode

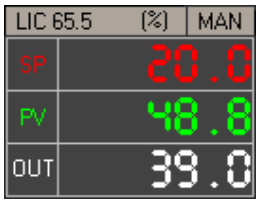
Each command after being selected, needs definitive confirmation through an appropriate window confirmation:



Every time that an element changes its state, the related color will be updated and displayed on section mimic.

CONTROL LOOP MANAGEMENT

On section mimic screens, Control Loop Regulators are displayed with:



- Tag and Status
- Set Point
- Process Value
- Output

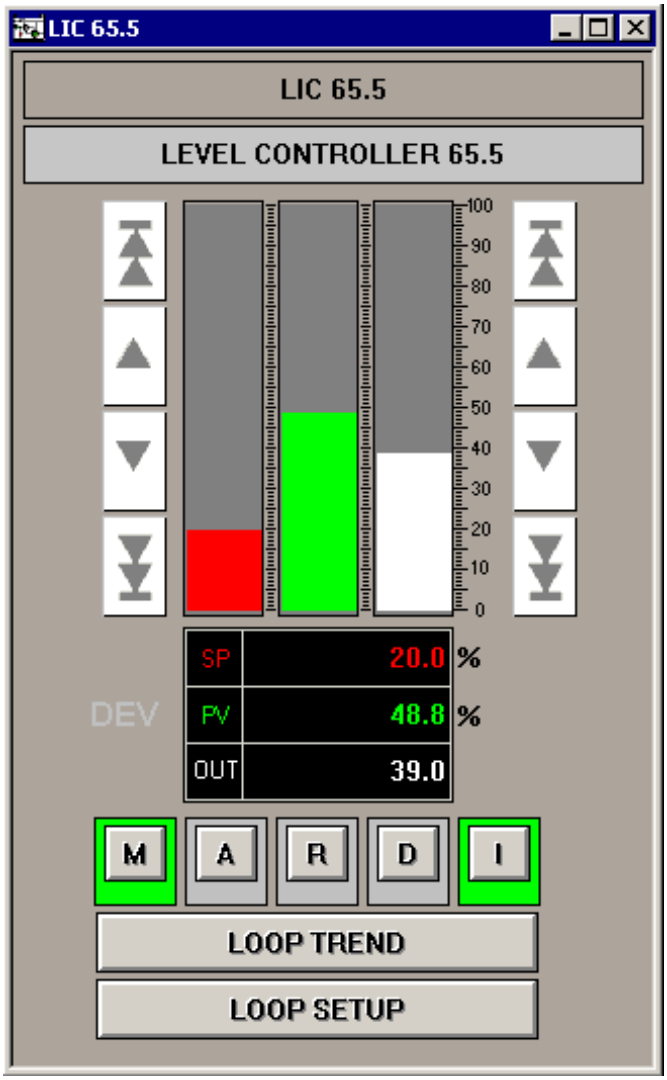
Following commands are accessible from the mimic screen:
- change status (Man / Auto / Cascade* / Recipe*) **:if applicable*
- modify Set Point value
- modify Output value
- access to the Control Loop Dedicated Window

Change Status:
Right-click on the Status Box will open the PID regulator command list. With the LEFT button you can select the desired command that will be active only after the confirmation.

Modify Set Point – Modify Output:
Left-click on the Value Box will open an Input Data Box where it's possible to introduce the new value that, if valid, will be displayed in the box. In case of introduction of not-valid value, the system restores automatically the old value.

Loop Control Window

Positioning the mouse on the Tag Description, the operator will open the Control Loop Dedicated Window:



In addition to the main data and parameters already shown in the section page, in this window there are:

- Bargraphs of Set Point, Process Value and Output
- Command Pushbuttons
  - **M**anual
  - **A**utomatic
  - **C**ascade *(if applicable)*
  - **R**ecipe *(if applicable)*
- Action Mode Pushbuttons
  - **D**irect
  - **I**nverse

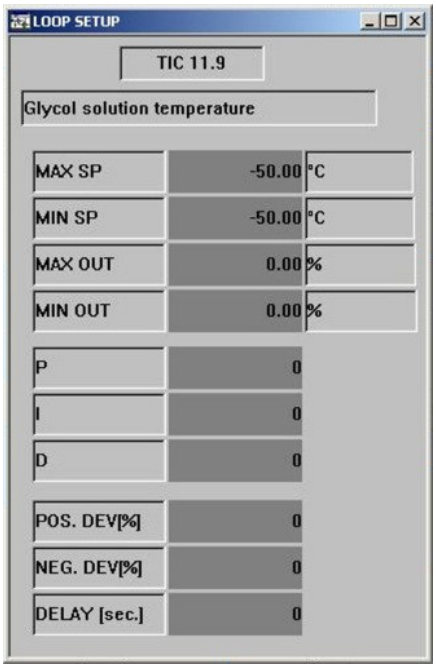
The status of active Command and Action is shown with a green frame around the button.

Set-point and Output can also be modified with increase/decrease arrows buttons.
With double arrow the actual value is increased/decreased of 10%
With single arrow the actual value is increased/decreased of 1%

Loop Setup Windows

Pressing LOOP SETUP button, the operator will have access to the following parameters:

- *maximum set point*
- *minimum set point*
- *maximum output*
- *minimum output*
- *proportional parameter (P)*
- *integral parameter (I)*
- *derivative parameter (D)*
- *positive deviation threshold (%)*
- *negative deviation threshold (%)*
- *deviation alarm delay time (sec)*

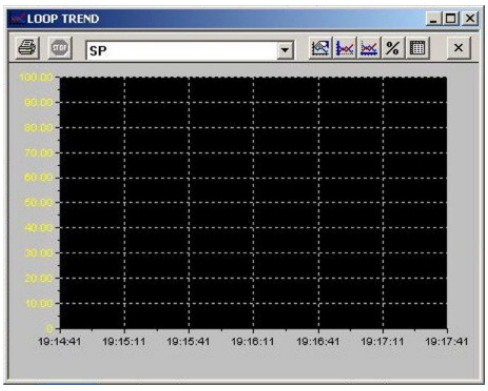


Values can be modified clicking with LEFT mouse button on the relevant box and introducing a valid value. If a not-valid value is introduced, the system restores the old one.

Loop Trend Window

Pressing LOOP TREND button the system will shown graphic trend lines for

- process value
- set point
- output
- high deviation limit
- low deviation limit



ALARMS MANAGEMENT

Alarms Strings and descriptions can be displayed in three way.

The selection can be done pushing one of following buttons  present on the top of each section mimic screen.

 Not displayed

 String of last occurred alarm displayed (on the bottom of the section page)

 Complete alarms page displayed (and minimize section page)

The status of each alarm can be identified by the color of the string description:

BLINK YELLOW/RED	unacknowledged alarm
RED	acknowledged alarm

The alarm management follows ISA-1B rules.

Two acknowledgement are possible:

Single alarm acknowledgement:

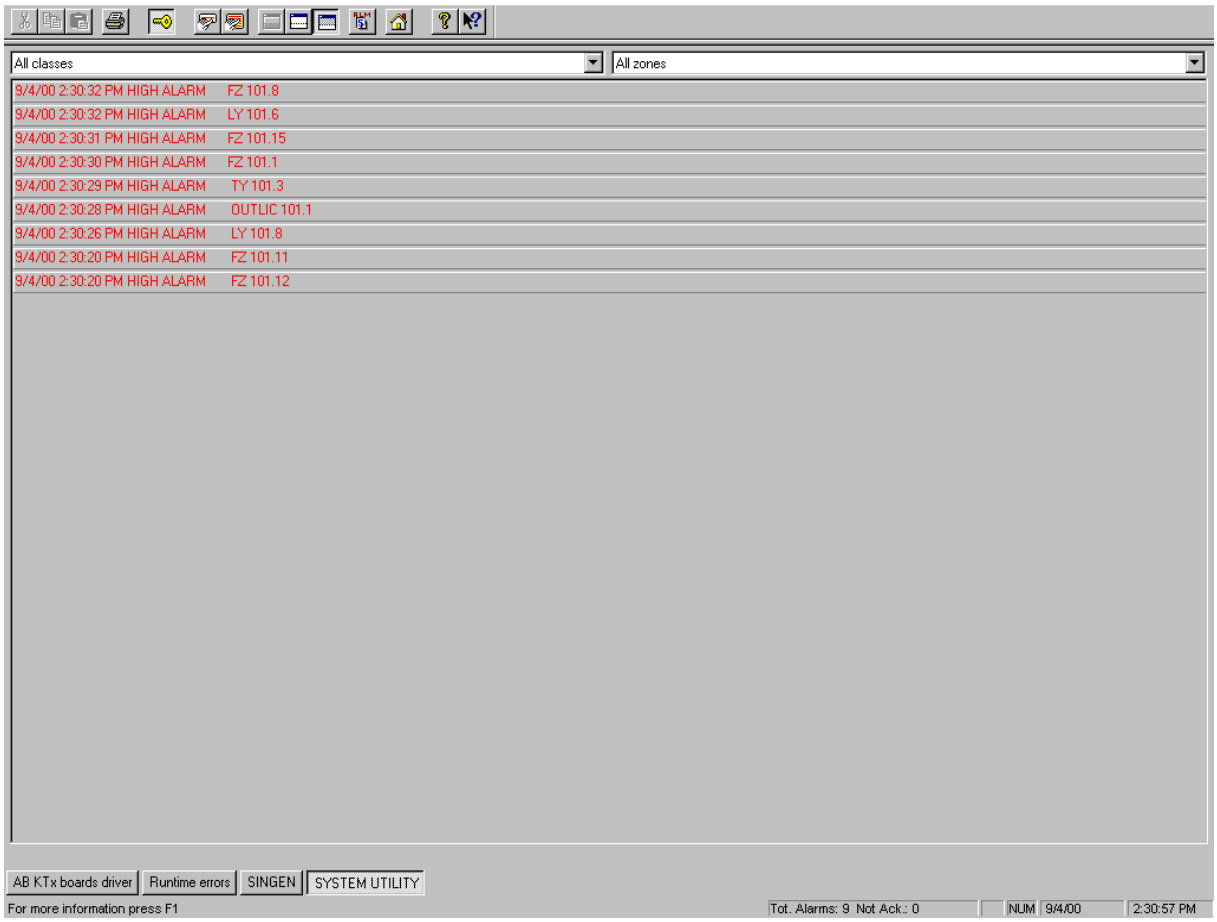
double clicking on the alarm string or pushing the button 

Global alarm acknowledgement:

Pushing the button 

On the complete alarm list a single alarm can be selected pointing the mouse on the string and clicking with LEFT button or the pressing **Enter**.
The selected alarm will be bordered with a rectangle of the same color of the alarm.

The scrolling to the next or previous page will be performed using PgUp and PgDn keys.


All classes
All zones
9/4/00 2:30:32 PM HIGH ALARM FZ 101.8
9/4/00 2:30:32 PM HIGH ALARM LY 101.6
9/4/00 2:30:31 PM HIGH ALARM FZ 101.15
9/4/00 2:30:30 PM HIGH ALARM FZ 101.1
9/4/00 2:30:29 PM HIGH ALARM TY 101.3
9/4/00 2:30:28 PM HIGH ALARM OUTLIC 101.1
9/4/00 2:30:26 PM HIGH ALARM LY 101.8
9/4/00 2:30:20 PM HIGH ALARM FZ 101.11
9/4/00 2:30:20 PM HIGH ALARM FZ 101.12
AB KTx boards driver
Runtime errors
SINGEN
SYSTEM UTILITY
For more information press F1
Tot. Alarms: 9 Not Ack.: 0
NUM
9/4/00
2:30:57 PM

HISTORICAL ALARMS MANAGEMENT

The system stores the date, the description and the time of each alarm that occurred, that is acknowledged and that is restored by the system

It will be stored also the events logging (change of state for motors, valves, regulations, change of PID parameters…).

Data are recorded on a file containing max. 65.000 fields; when the file reaches this dimension, oldest data are overwritten.

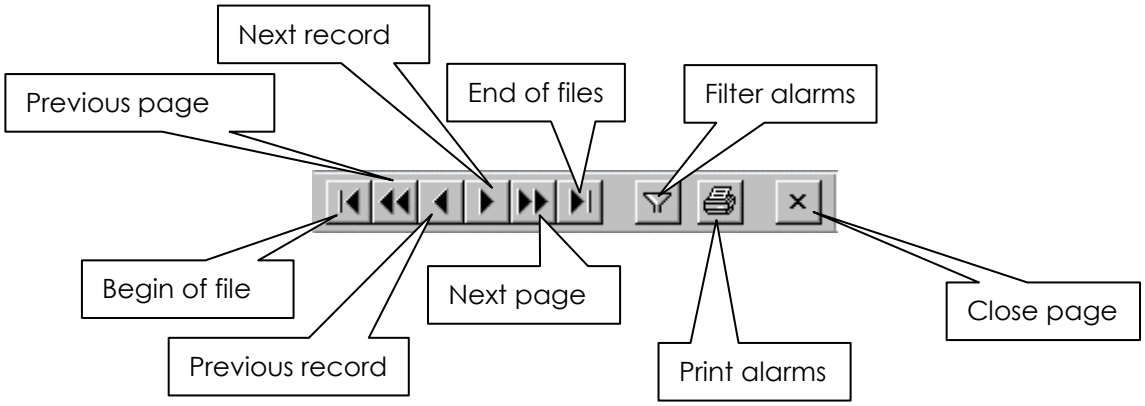
Logged events are displayed pushing the button  present in the toolbar

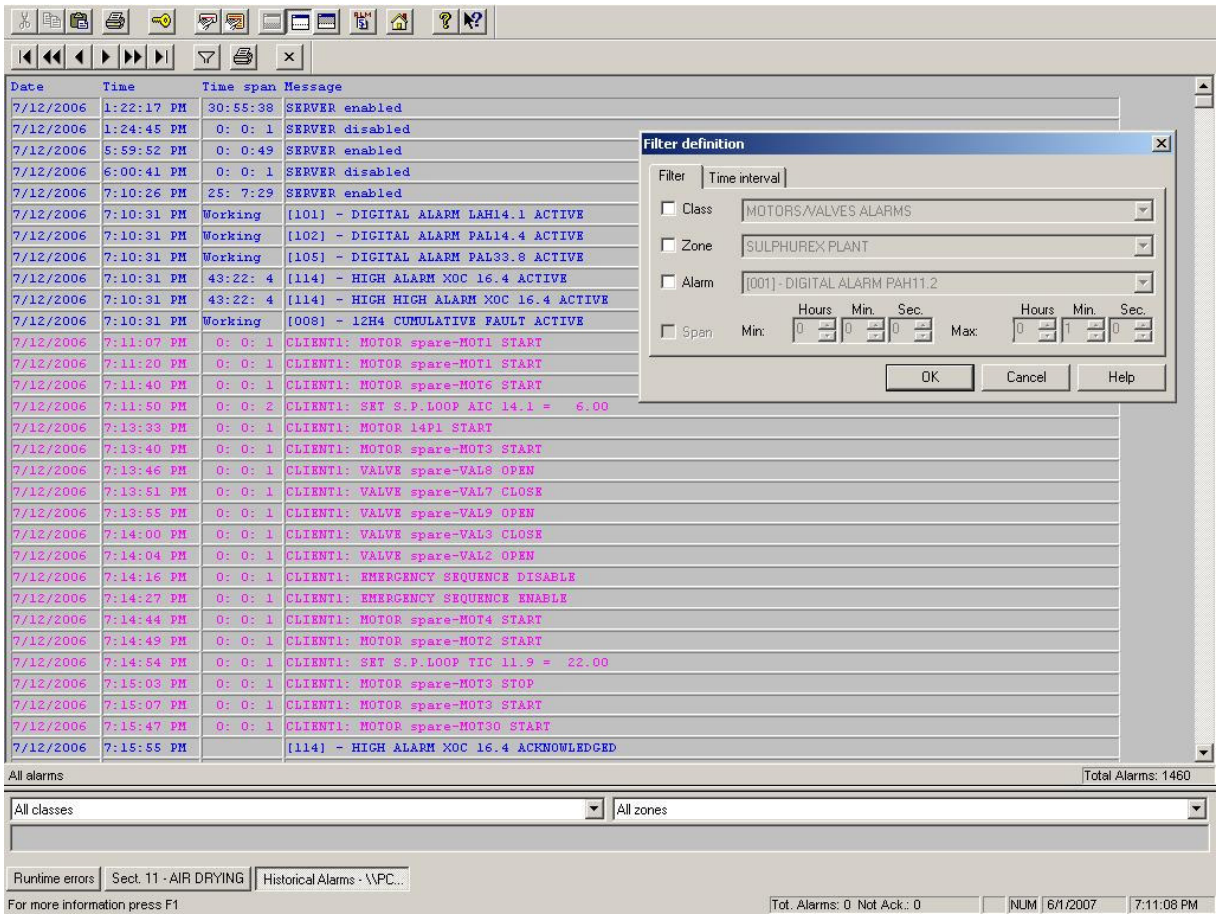
Each string contains date and hour, duration, description and status (active, acknowledged, recovered) when the event is occurred.

The visualization order is in chronological mode, with the newer data listed in the bottom of the page.

With **PgUp** and **PgDn** keys it is possible to scroll previous and next pages.

Here below is shown and described the Command Bar present on the top of the page:



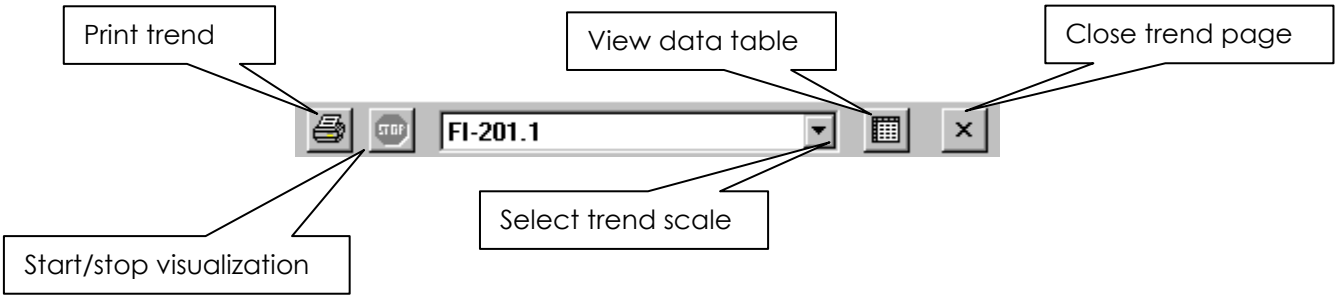

Date Time Time span Message
7/12/2006 1:22:17 PM 30:55:38 SERVER enabled
7/12/2006 1:24:45 PM 0: 0: 1 SERVER disabled
7/12/2006 5:59:52 PM 0: 0:49 SERVER enabled
7/12/2006 6:00:41 PM 0: 0: 1 SERVER disabled
7/12/2006 7:10:26 PM 25: 7:29 SERVER enabled
7/12/2006 7:10:31 PM Working [101] - DIGITAL ALARM LAH14.1 ACTIVE
7/12/2006 7:10:31 PM Working [102] - DIGITAL ALARM PAL14.4 ACTIVE
7/12/2006 7:10:31 PM Working [105] - DIGITAL ALARM PAL33.8 ACTIVE
7/12/2006 7:10:31 PM 43:22: 4 [114] - HIGH ALARM XOC 16.4 ACTIVE
7/12/2006 7:10:31 PM 43:22: 4 [114] - HIGH HIGH ALARM XOC 16.4 ACTIVE
7/12/2006 7:10:31 PM Working [008] - 12H4 CUMULATIVE FAULT ACTIVE
7/12/2006 7:11:07 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT1 START
7/12/2006 7:11:20 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT1 START
7/12/2006 7:11:40 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT6 START
7/12/2006 7:11:50 PM 0: 0: 2 CLIENT1: SET S.P.LOOP AIC 14.1 = 6.00
7/12/2006 7:13:33 PM 0: 0: 1 CLIENT1: MOTOR 14P1 START
7/12/2006 7:13:40 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT3 START
7/12/2006 7:13:46 PM 0: 0: 1 CLIENT1: VALVE spare-VAL8 OPEN
7/12/2006 7:13:51 PM 0: 0: 1 CLIENT1: VALVE spare-VAL7 CLOSE
7/12/2006 7:13:55 PM 0: 0: 1 CLIENT1: VALVE spare-VAL9 OPEN
7/12/2006 7:14:00 PM 0: 0: 1 CLIENT1: VALVE spare-VAL3 CLOSE
7/12/2006 7:14:04 PM 0: 0: 1 CLIENT1: VALVE spare-VAL2 OPEN
7/12/2006 7:14:16 PM 0: 0: 1 CLIENT1: EMERGENCY SEQUENCE DISABLE
7/12/2006 7:14:27 PM 0: 0: 1 CLIENT1: EMERGENCY SEQUENCE ENABLE
7/12/2006 7:14:44 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT4 START
7/12/2006 7:14:49 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT2 START
7/12/2006 7:14:54 PM 0: 0: 1 CLIENT1: SET S.P.LOOP TIC 11.9 = 22.00
7/12/2006 7:15:03 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT3 STOP
7/12/2006 7:15:07 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT3 START
7/12/2006 7:15:47 PM 0: 0: 1 CLIENT1: MOTOR spare-MOT30 START
7/12/2006 7:15:55 PM [114] - HIGH ALARM XOC 16.4 ACKNOWLEDGED
Filter definition
Filter
Time interval
Class
MOTORS/VALVES ALARMS
Zone
SULPHUREX PLANT
Alarm
[001] - DIGITAL ALARM PAH11.2
Span
Min:
Hours Min. Sec.
Max:
Hours Min. Sec.
OK
Cancel
Help
All alarms
Total Alarms: 1460
All classes
All zones
Runtime errors
Sect. 11 - AIR DRYING
Historical Alarms - \\PC...
For more information press F1
Tot. Alarms: 0 Not Ack.: 0
NUM
6/1/2007
7:11:08 PM

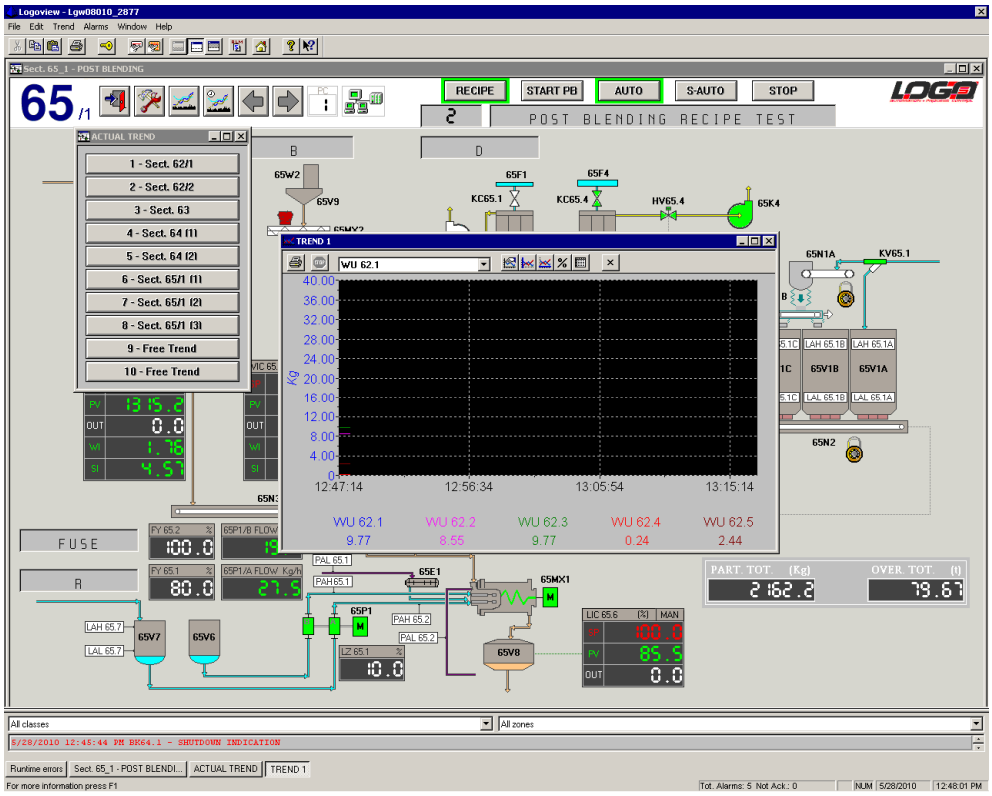
REAL TIME TRENDS

Actual trend pages are recalled from any section layout by pressing this button:

It is shown a list of pre-configured Sections trend pages:

In a single trend page are displayed:
- Analog value in real time
- Tag name
- Limits and Measure Unit
- Time base (start and end time)





HISTORICAL TRENDS

Historical trend pages are recalled from any section layout pressing this button:

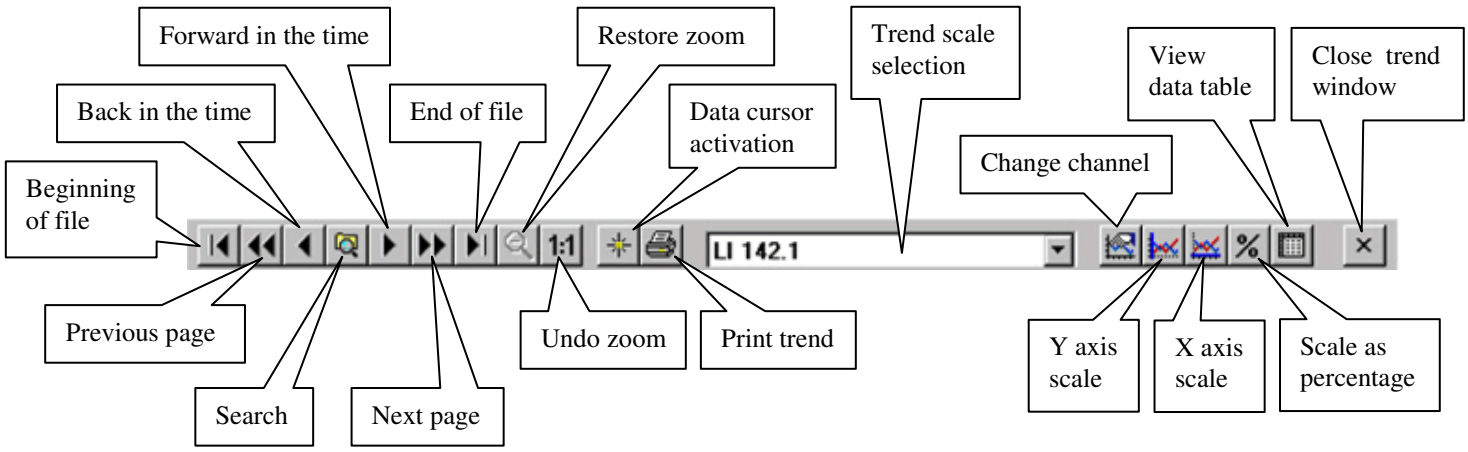
Is shown a list of pre-configured Sections trend pages:

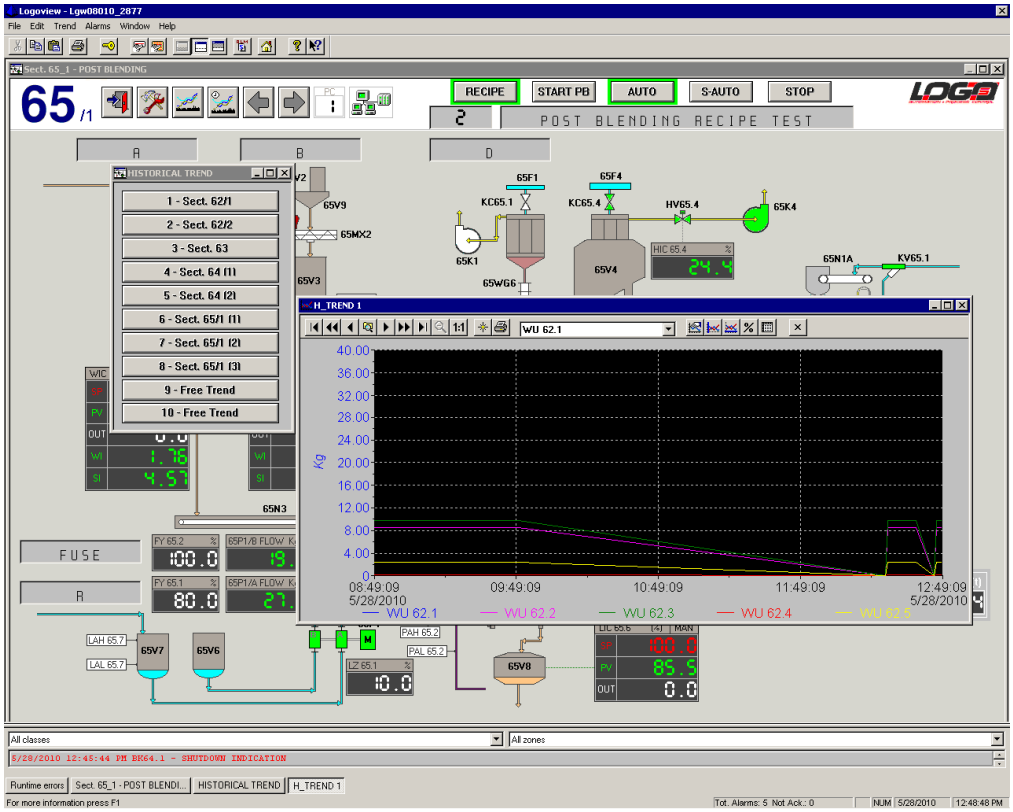
In a single trend page are displayed:
- Analog value referred to the stored period
- Tag name
- Limits and Measure Unit
- Time base (start and end time)

the first data displayed will show to the last interval of time stored into the historical file HTREND.DBF associated to the trend.

This file can store data for 30 days (one record for minute).

Historical trend toolbar

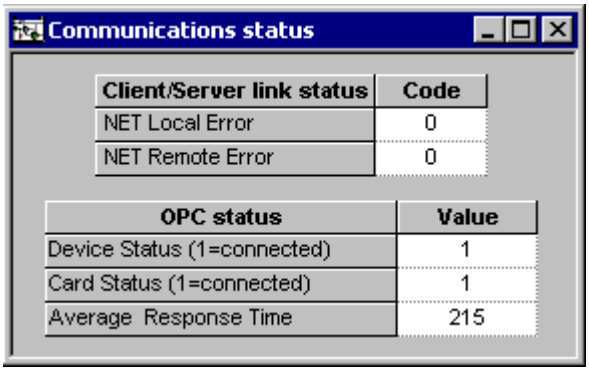



Logoview - Lgw08010_2877
File Edit Trend Alarms Window Help
Sect. 65_1 - POST BLENDING
65 /1
RECIPE
START PB
AUTO
S-AUTO
STOP
2
POST BLENDING RECIPE TEST
A
B
D
HISTORICAL TREND
1 - Sect. 62/1
2 - Sect. 62/2
3 - Sect. 63
4 - Sect. 64 f1)
5 - Sect. 64 f2)
6 - Sect. 65/1 f1)
7 - Sect. 65/1 f2)
8 - Sect. 65/1 f3)
9 - Free Trend
10 - Free Trend
65V9
65MX2
65V3
65F1
KC65.1
65K1
65WG6
65F4
KC65.4
65V4
HV65.4
65K4
HIC 65.4
24.4
65N1A
KV65.1
H_TREND 1
WU 62.1
40.00
36.00
32.00
28.00
24.00
20.00
16.00
12.00
8.00
4.00
0
Kg
08:49:09
5/28/2010
09:49:09
10:49:09
11:49:09
12:49:09
5/28/2010
WU 62.1
WU 62.2
WU 62.3
WU 62.4
WU 62.5
WIC
SP
PV
OUT
1.76
4.57
65N3
FUSE
R
FY 65.2
100.0
65P1/B FLOW K
19.
FY 65.1
80.0
65P1/A FLOW K
27.
LAH 65.7
LAL 65.7
65V7
65V6
PAH 65.2
PAL 65.2
LZ 65.1
10.0
65V8
100.0
85.5
0.0
All classes
All zones
5/28/2010 12:48:44 PM BK64.1 - SHUTDOWN INDICATION
Runtime errors
Sect. 65_1 - POST BLENDI...
HISTORICAL TREND
H_TREND 1
For more information press F1
Tot. Alarms: 5 Not Ack.: 0
NUM
5/28/2010
12:48:48 PM

COMMUNICATION STATUS

It is possible control the status of the communication looking the relative box:

This little architecture shows the communication status between the server and the clients, between the servers and the communication from/to the PLC.
By pressing this box is possible verify the communication status codes of the architecture:



RECIPE

Recipe management is based on Microsoft EXCEL.

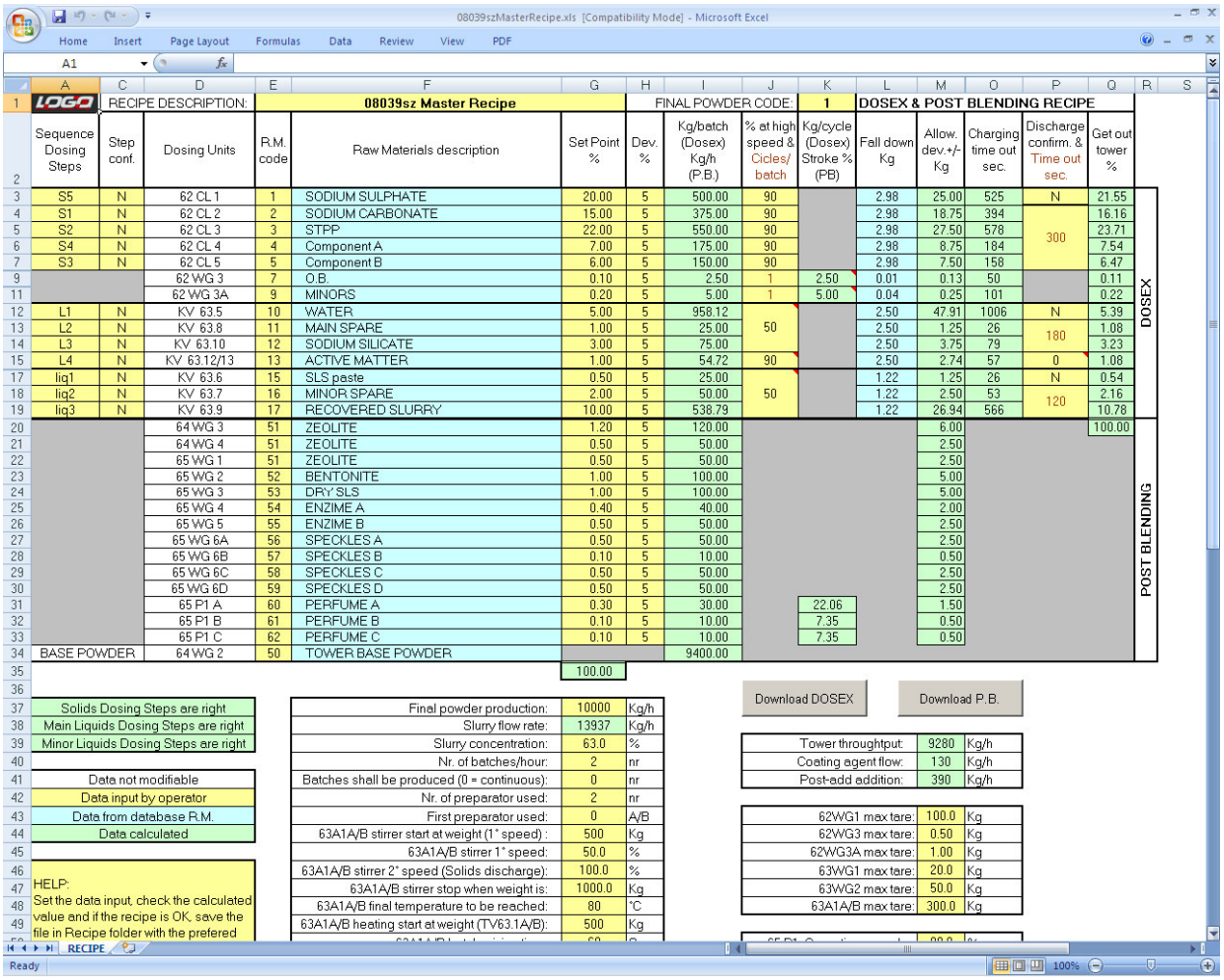
By clicking on the RECIPE button,will be the folder named “Recipe”.

Through EXCEL Interface and Tools, will be possible to open, modify, copy, save, print out, …etc recipe files.

Following data can be set in the recipe:
- Recipe Code and Description
- Raw Material Code for all Dosing Units
- Reference Set Points and Deviations for all Dosing Units
- Other reference values for sequence control and production management

Other data displayed in the recipe are either loaded from Logoview NT Client Application or directly calculated by the same recipe.

Imputing data is checked by the system to avoid setting mistakes.
Once completed, the recipe can be downloaded with the DOWNLOAD button.

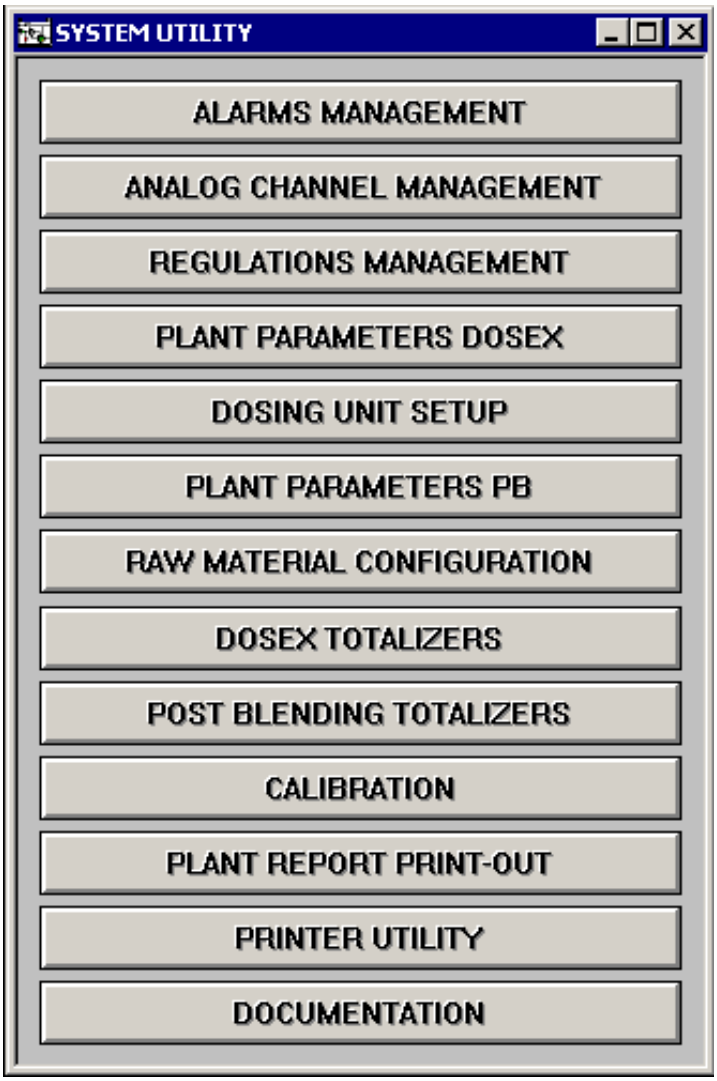


HARDCOPY

It is possible to get hardcopies of video pages by pressing “CTRL-P”, the “Print” button, by selecting “A4 (210 x 297 mm.)” in Setup/Paper Options, and “Landscape” in Features.

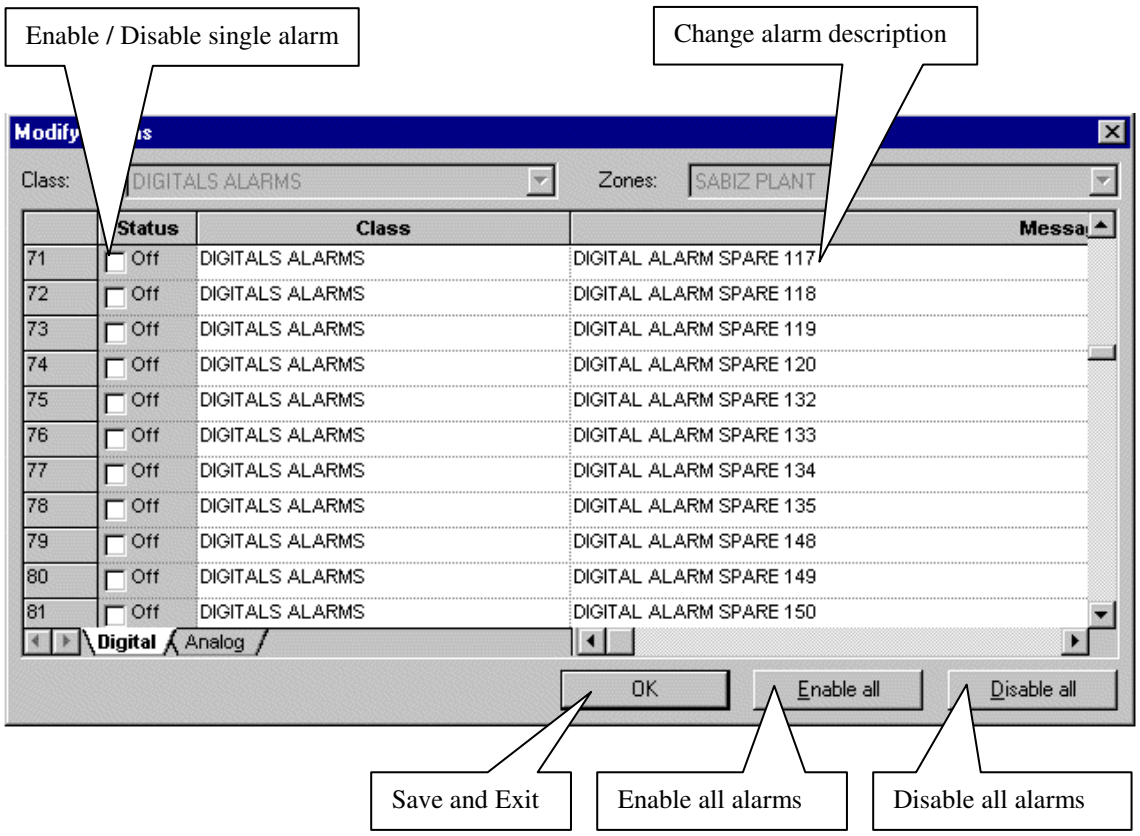
SYSTEM UTILITIES

System Utilities Menu, accessible with the proper button  preset in each section page, is configured as follows:



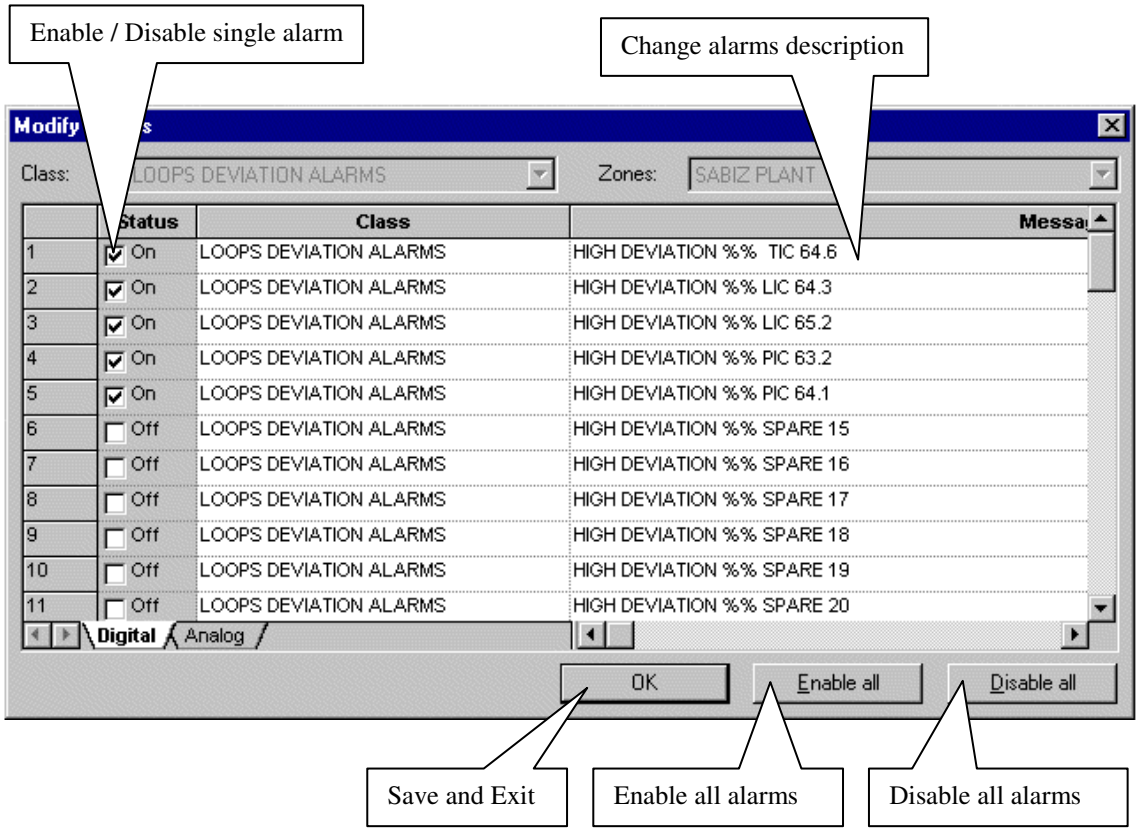
DIGITAL ALARMS MANAGEMENT

In this page it is possible to enable/disable digital alarms and change alarms string.



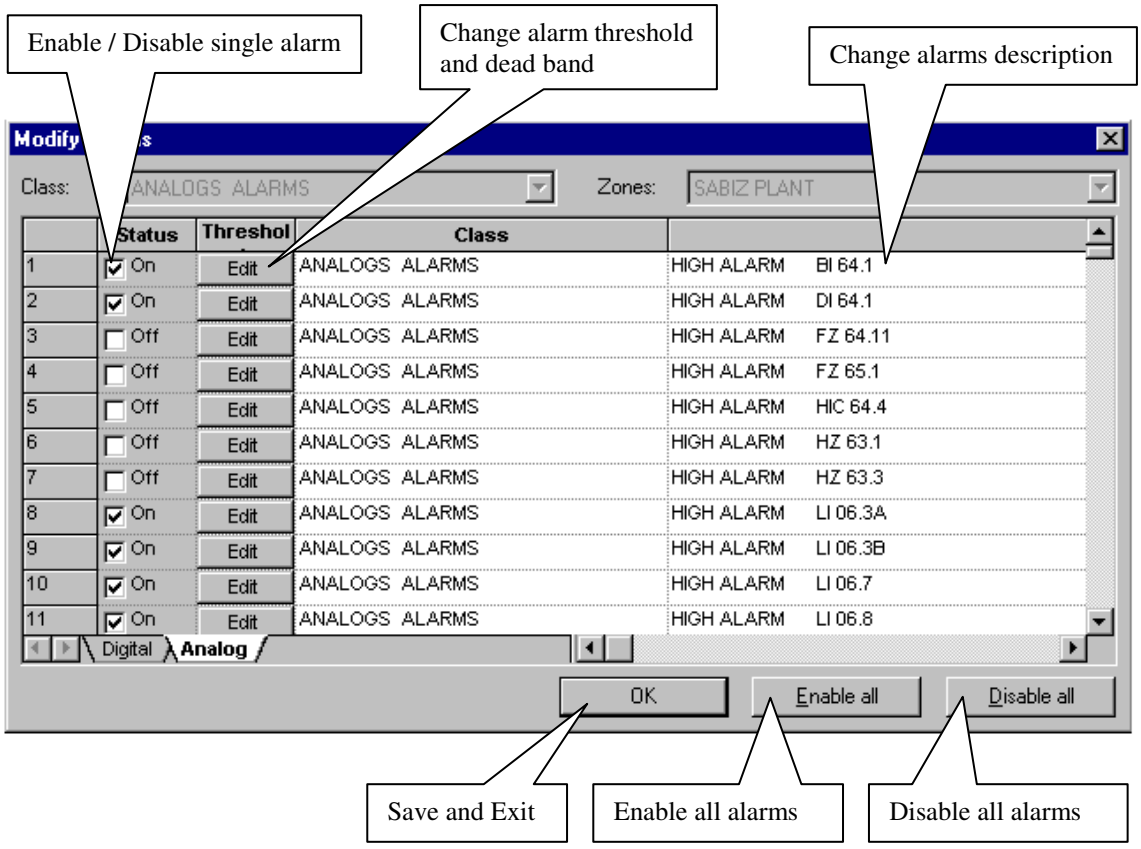
LOOP DEVIATION ALARMS MANAGEMENT

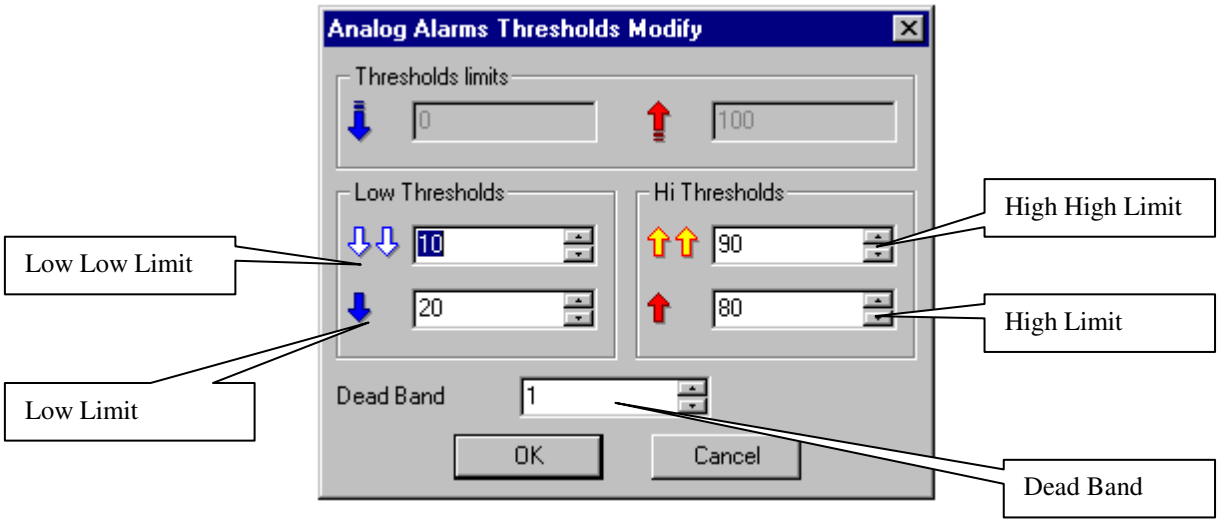
In this page it is possible to enable/disable loop deviation alarms and change alarms string.



ANALOG ALARMS MANAGEMENT

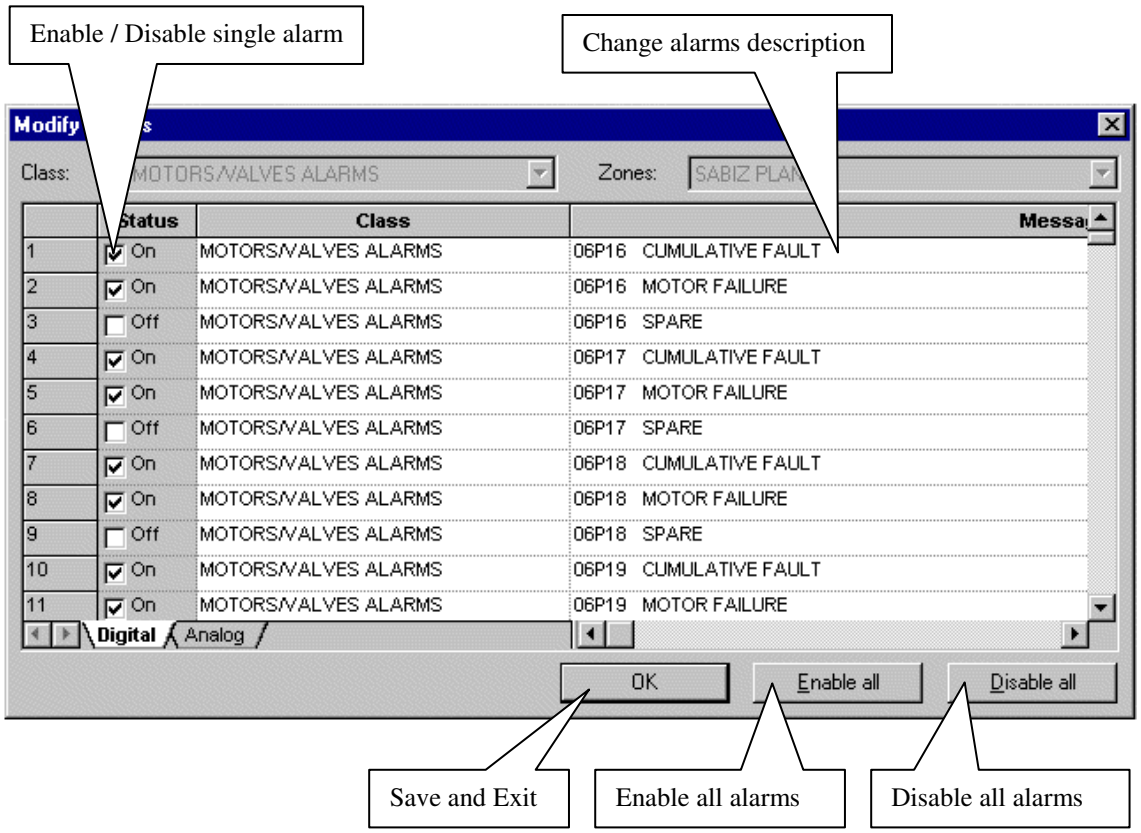
In this page it is possible to enable/disable analog alarms and change alarms string.





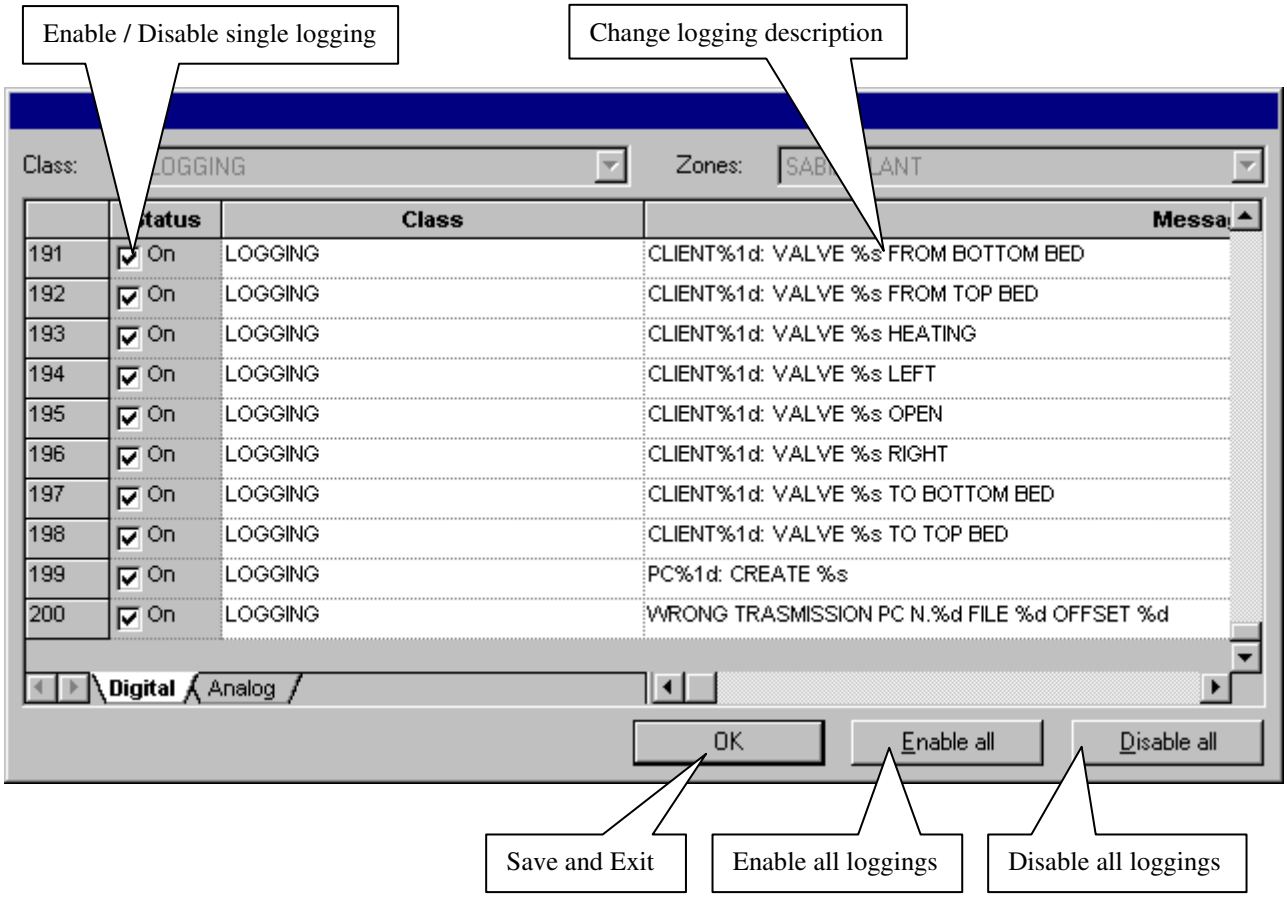
MOTORS/VALVES ALARMS MANAGEMENT

In this page it is possible to enable/disable motors/valves alarms and change alarms string.



LOGGING MANAGEMENT

In this page it is possible to enable/disable the log on file and on printer and change the correspondent string.



ANALOG MANAGEMENT

The function allows configuring plant analog channels.

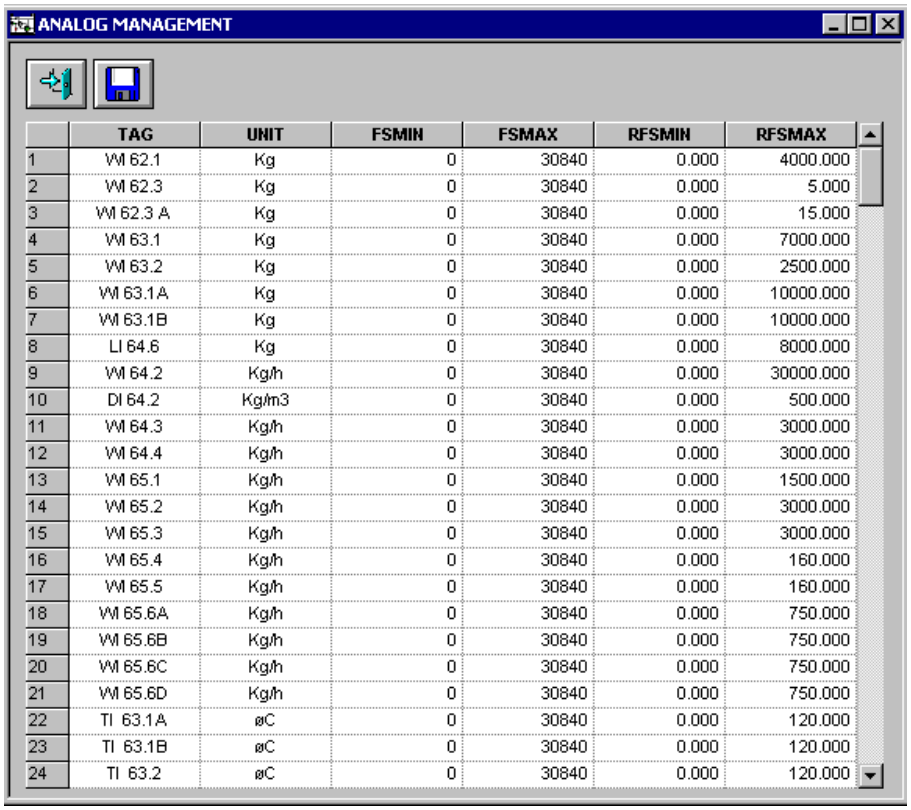
TAG:
The Operator can change the tag of analog channels. This modification will be active in the configuration pages and in PID I/O.
Alarm strings shall be modified separately. (see above “Analog Alarms Management”).

UNIT:
The Operator can modify the measure unit of analog channels and he will see it modified into the pages of loops and trends.

Field full scale Minimum and Maximum Numeric value:
These values corresponds to the range of the numeric conversion signal into PLC card.

Field full scale Minimum and Maximum Engineering value:
These values corresponds to the signal range (in eng. Units); used to convert the numeric values above in eng. value.

Exiting from this configuration page, if are present data modified but not saved, the system prompt to the operator the choice of exit without saving or save before to leave.



	TAG	UNIT	FSMIN	FSMAX	RFSMIN	RFSMAX
1	WI 62.1	Kg	0	30840	0.000	4000.000
2	WI 62.3	Kg	0	30840	0.000	5.000
3	WI 62.3 A	Kg	0	30840	0.000	15.000
4	WI 63.1	Kg	0	30840	0.000	7000.000
5	WI 63.2	Kg	0	30840	0.000	2500.000
6	WI 63.1A	Kg	0	30840	0.000	10000.000
7	WI 63.1B	Kg	0	30840	0.000	10000.000
8	LI 64.6	Kg	0	30840	0.000	8000.000
9	WI 64.2	Kg/h	0	30840	0.000	30000.000
10	DI 64.2	Kg/m3	0	30840	0.000	500.000
11	WI 64.3	Kg/h	0	30840	0.000	3000.000
12	WI 64.4	Kg/h	0	30840	0.000	3000.000
13	WI 65.1	Kg/h	0	30840	0.000	1500.000
14	WI 65.2	Kg/h	0	30840	0.000	3000.000
15	WI 65.3	Kg/h	0	30840	0.000	3000.000
16	WI 65.4	Kg/h	0	30840	0.000	160.000
17	WI 65.5	Kg/h	0	30840	0.000	160.000
18	WI 65.6A	Kg/h	0	30840	0.000	750.000
19	WI 65.6B	Kg/h	0	30840	0.000	750.000
20	WI 65.6C	Kg/h	0	30840	0.000	750.000
21	WI 65.6D	Kg/h	0	30840	0.000	750.000
22	TI 63.1A	øC	0	30840	0.000	120.000
23	TI 63.1B	øC	0	30840	0.000	120.000
24	TI 63.2	øC	0	30840	0.000	120.000

LOOPS MANAGEMENT

This function allows to associate to system regulation Loops the input and the output variables.

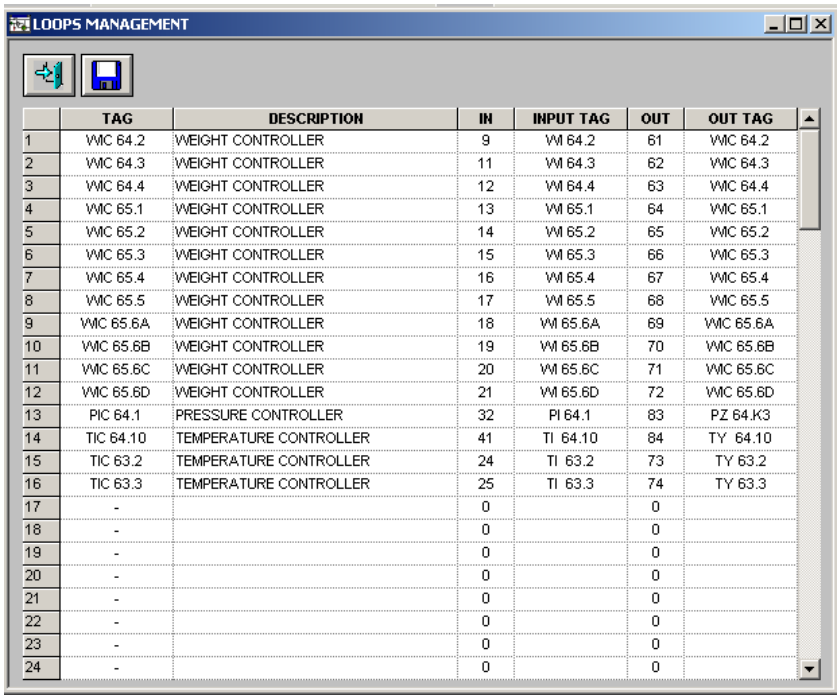
NAME:
The Operator can change the tag of LOOP. This modification will be active in the configuration pages.
Alarm strings shall be modified separately. (see above “Loop Deviation Alarms Management”).

DESCRIPTION:
The operator can change all the descriptions that will show into the specific page of Loop visualization.

IN CHANNEL:
It is the number of the Loop analog channel input and it corresponds to the input position into Data Base. Into the nearest box “Input Name” it is shown the corresponding tag.

OUT CHANNEL:
It is the number of the Loop analog channel output and it corresponds to the output position into Data Base. Into the nearest box “Out Name” it is shown the corresponding tag.

Exiting from this configuration page, if are present data modified but not saved, the system prompt to the operator the choice of exit without saving or save before to leave.



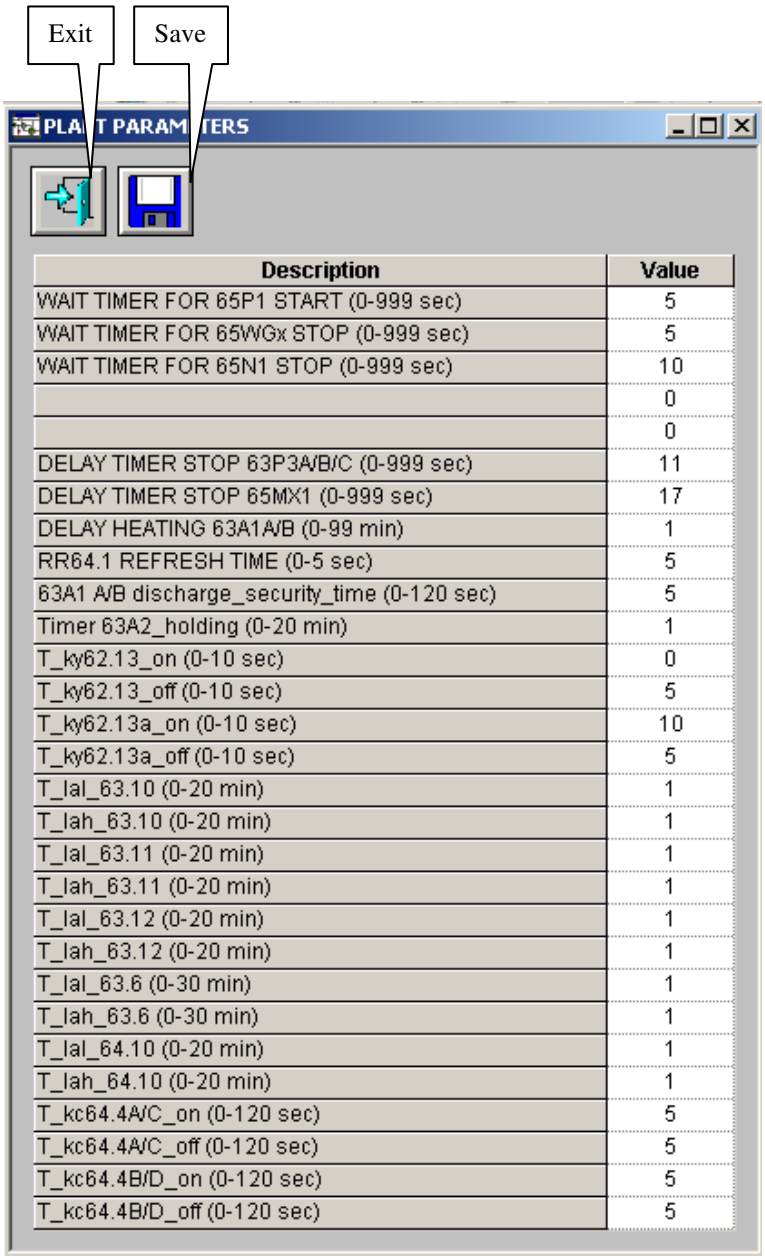
	TAG	DESCRIPTION	IN	INPUT TAG	OUT	OUT TAG
1	WIC 64.2	WEIGHT CONTROLLER	9	WI 64.2	61	WIC 64.2
2	WIC 64.3	WEIGHT CONTROLLER	11	WI 64.3	62	WIC 64.3
3	WIC 64.4	WEIGHT CONTROLLER	12	WI 64.4	63	WIC 64.4
4	WIC 65.1	WEIGHT CONTROLLER	13	WI 65.1	64	WIC 65.1
5	WIC 65.2	WEIGHT CONTROLLER	14	WI 65.2	65	WIC 65.2
6	WIC 65.3	WEIGHT CONTROLLER	15	WI 65.3	66	WIC 65.3
7	WIC 65.4	WEIGHT CONTROLLER	16	WI 65.4	67	WIC 65.4
8	WIC 65.5	WEIGHT CONTROLLER	17	WI 65.5	68	WIC 65.5
9	WIC 65.6A	WEIGHT CONTROLLER	18	WI 65.6A	69	WIC 65.6A
10	WIC 65.6B	WEIGHT CONTROLLER	19	WI 65.6B	70	WIC 65.6B
11	WIC 65.6C	WEIGHT CONTROLLER	20	WI 65.6C	71	WIC 65.6C
12	WIC 65.6D	WEIGHT CONTROLLER	21	WI 65.6D	72	WIC 65.6D
13	PIC 64.1	PRESSURE CONTROLLER	32	PI 64.1	83	PZ 64.K3
14	TIC 64.10	TEMPERATURE CONTROLLER	41	TI 64.10	84	TY 64.10
15	TIC 63.2	TEMPERATURE CONTROLLER	24	TI 63.2	73	TY 63.2
16	TIC 63.3	TEMPERATURE CONTROLLER	25	TI 63.3	74	TY 63.3
17	-		0		0	
18	-		0		0	
19	-		0		0	
20	-		0		0	
21	-		0		0	
22	-		0		0	
23	-		0		0	
24	-		0		0	

PLANT PARAMETERS DOSEX

On this windows it‘s possible to define the cycle parameters of the dosex dosing units.

Data can be modified separately, by positioning with the mouse into the relative box, introducing the new value and confirming it with the ENTER key.

For transferring on the PLC the visualized values it’s necessary to push the SAVE button.



Description	Value
WAIT TIMER FOR 65P1 START (0-999 sec)	5
WAIT TIMER FOR 65WGx STOP (0-999 sec)	5
WAIT TIMER FOR 65N1 STOP (0-999 sec)	10
	0
	0
DELAY TIMER STOP 63P3A/B/C (0-999 sec)	11
DELAY TIMER STOP 65MX1 (0-999 sec)	17
DELAY HEATING 63A1A/B (0-99 min)	1
RR64.1 REFRESH TIME (0-5 sec)	5
63A1 A/B discharge_security_time (0-120 sec)	5
Timer 63A2_holding (0-20 min)	1
T_ky62.13_on (0-10 sec)	0
T_ky62.13_off (0-10 sec)	5
T_ky62.13a_on (0-10 sec)	10
T_ky62.13a_off (0-10 sec)	5
T_lal_63.10 (0-20 min)	1
T_lah_63.10 (0-20 min)	1
T_lal_63.11 (0-20 min)	1
T_lah_63.11 (0-20 min)	1
T_lal_63.12 (0-20 min)	1
T_lah_63.12 (0-20 min)	1
T_lal_63.6 (0-30 min)	1
T_lah_63.6 (0-30 min)	1
T_lal_64.10 (0-20 min)	1
T_lah_64.10 (0-20 min)	1
T_kc64.4A/C_on (0-120 sec)	5
T_kc64.4A/C_off (0-120 sec)	5
T_kc64.4B/D_on (0-120 sec)	5
T_kc64.4B/D_off (0-120 sec)	5

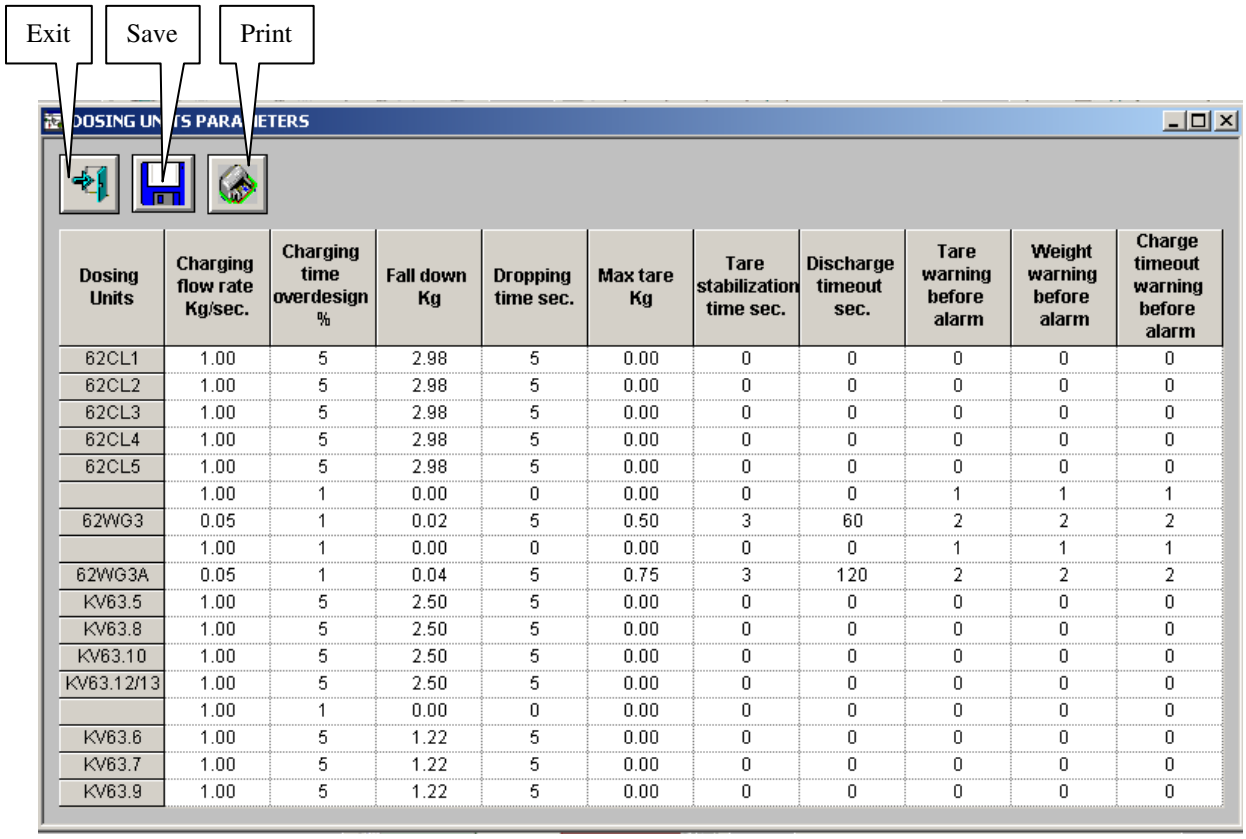
DOSING UNIT SETUP

On this windows it‘s possible to set the main parameters of the dosex dosing units.

Data can be modified separately, by positioning with the mouse into the relative box, introducing the new value and confirming it with the ENTER key.

For transferring on the PLC the visualized values it’s necessary to push the SAVE button.

To make a print of all DOSING UNITS PARAMETERS it’s available the **PRINT** button.



Dosing Units	Charging flow rate Kg/sec.	Charging time overdesign %	Fall down Kg	Dropping time sec.	Max tare Kg	Tare stabilization time sec.	Discharge timeout sec.	Tare warning before alarm	Weight warning before alarm	Charge timeout warning before alarm
62CL1	1.00	5	2.98	5	0.00	0	0	0	0	0
62CL2	1.00	5	2.98	5	0.00	0	0	0	0	0
62CL3	1.00	5	2.98	5	0.00	0	0	0	0	0
62CL4	1.00	5	2.98	5	0.00	0	0	0	0	0
62CL5	1.00	5	2.98	5	0.00	0	0	0	0	0
	1.00	1	0.00	0	0.00	0	0	1	1	1
62WG3	0.05	1	0.02	5	0.50	3	60	2	2	2
	1.00	1	0.00	0	0.00	0	0	1	1	1
62WG3A	0.05	1	0.04	5	0.75	3	120	2	2	2
KV63.5	1.00	5	2.50	5	0.00	0	0	0	0	0
KV63.8	1.00	5	2.50	5	0.00	0	0	0	0	0
KV63.10	1.00	5	2.50	5	0.00	0	0	0	0	0
KV63.12/13	1.00	5	2.50	5	0.00	0	0	0	0	0
	1.00	1	0.00	0	0.00	0	0	0	0	0
KV63.6	1.00	5	1.22	5	0.00	0	0	0	0	0
KV63.7	1.00	5	1.22	5	0.00	0	0	0	0	0
KV63.9	1.00	5	1.22	5	0.00	0	0	0	0	0

RAW MATERIAL DEFINITION

On this page it's possible to associate at the 100 possible Raw Material Number the correspondent Raw Material Description, relevant Molecular Weight and Concentration, necessary to manage the dosex and the postblend recipes.

For the RAW MATERIAL DEFINITION the system uses Microsoft EXCEL tools.

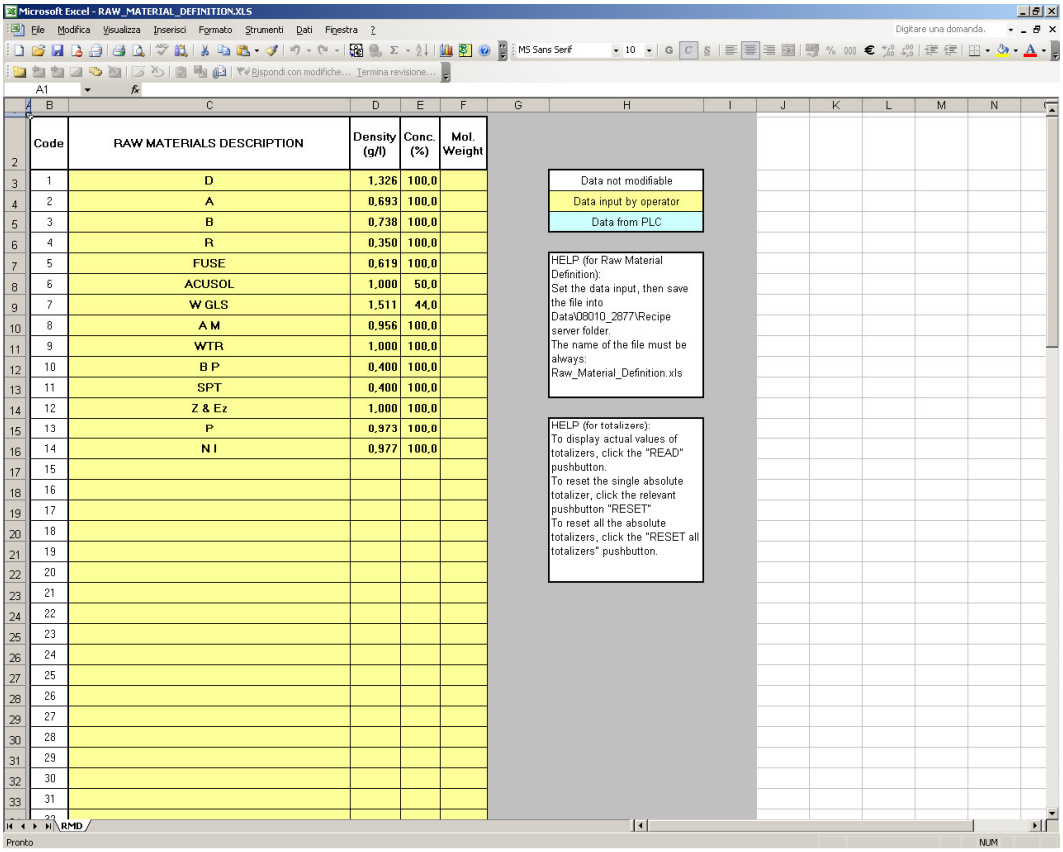
By clicking the relative button the system will automatically point in the local folder "Recipe".

After that, the operator will use Excel instruments for the various functions of file management (opening, saving, print out, etc.); it is being understood that the operator will be guided and controlled for avoiding any kind of error (range limits).

If answered, click "yes" to update all linked information.

The RAW MATERIAL DEFINITION is one only file and the operator must not change the name; the name must ALWAYS be Raw_Material_Definition.xls (in this case the file name is very important for the system)

Following image shows a possible Raw_Material_Definition file.



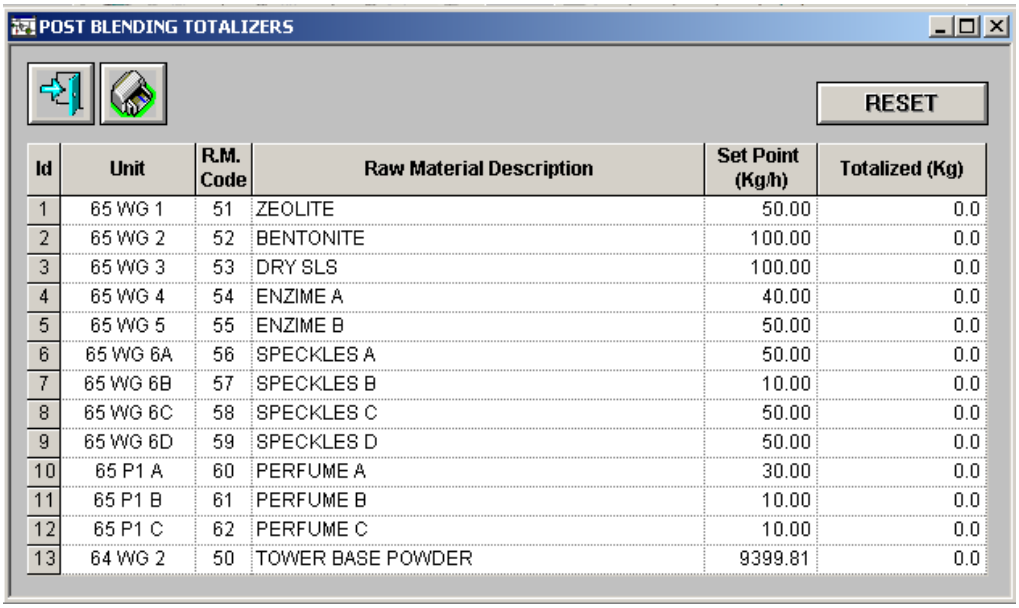
DOSEX AND POST BLENDING TOTALIZERS

On this page it's possible to view the Recipe Set Point and actual totalizers.

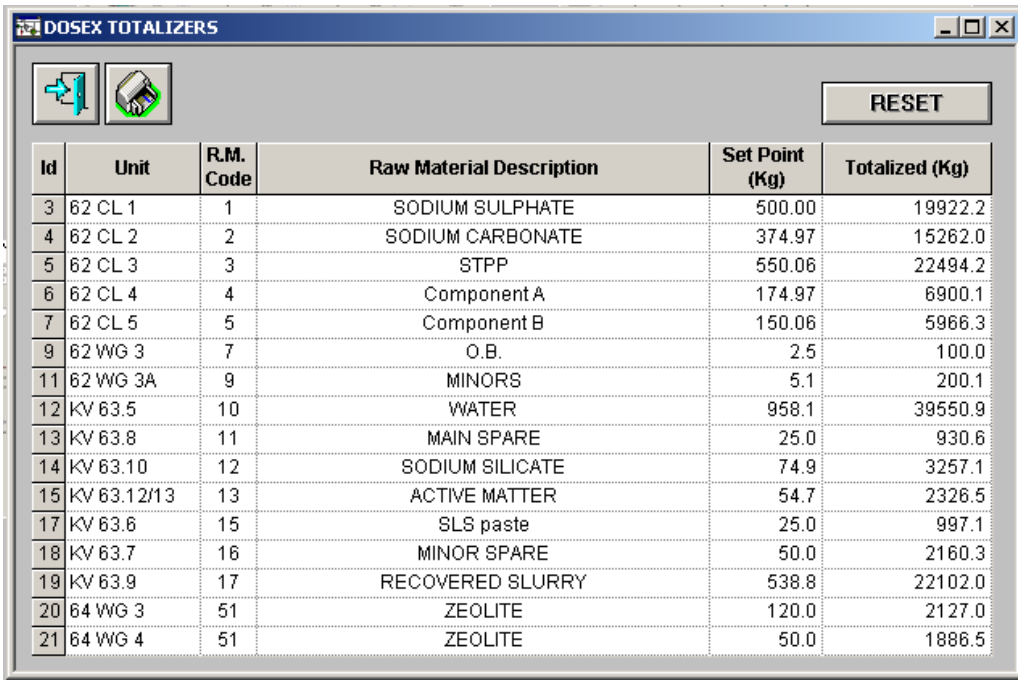
The Raw Material Code and the Raw Material description correspond to those of the last recipe downloaded.

These data are automatically printed at the end of the production.

To make a print of the TOTALIZERS it's also available the **PRINT** button.



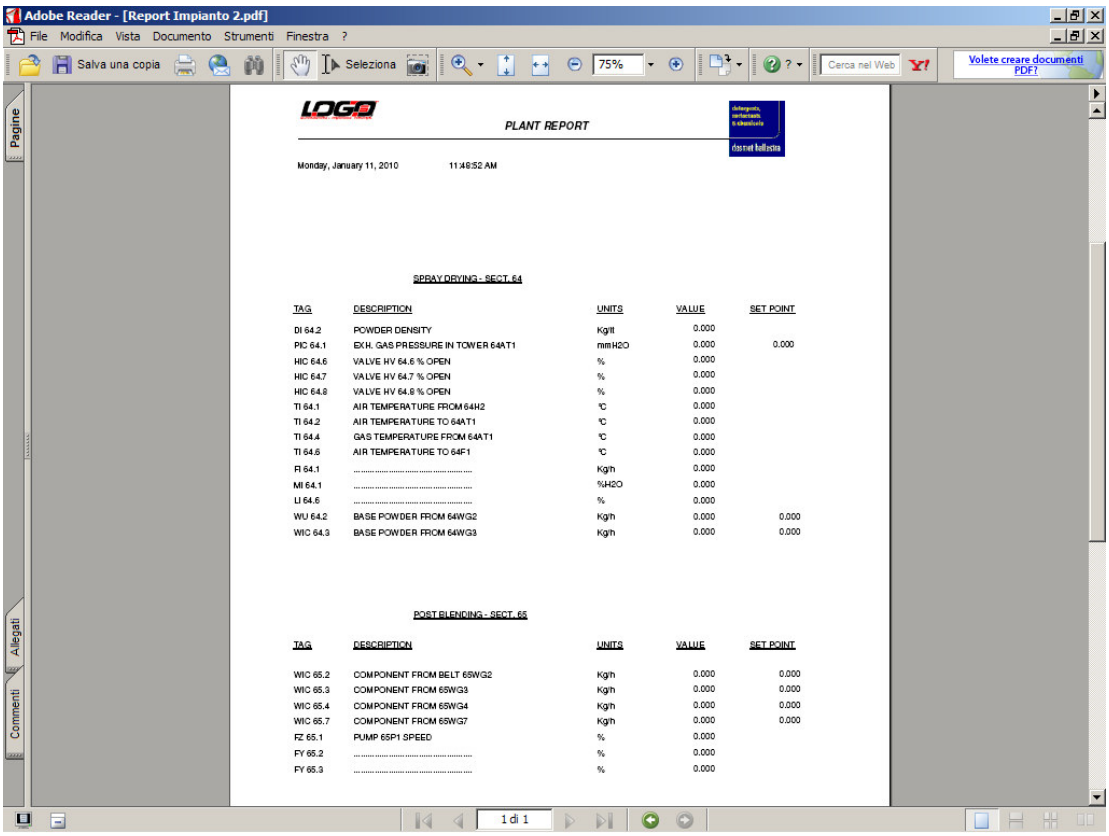
Id	Unit	R.M. Code	Raw Material Description	Set Point (Kg/h)	Totalized (Kg)
1	65 WG 1	51	ZEOLITE	50.00	0.0
2	65 WG 2	52	BENTONITE	100.00	0.0
3	65 WG 3	53	DRY SLS	100.00	0.0
4	65 WG 4	54	ENZIME A	40.00	0.0
5	65 WG 5	55	ENZIME B	50.00	0.0
6	65 WG 6A	56	SPECKLES A	50.00	0.0
7	65 WG 6B	57	SPECKLES B	10.00	0.0
8	65 WG 6C	58	SPECKLES C	50.00	0.0
9	65 WG 6D	59	SPECKLES D	50.00	0.0
10	65 P1 A	60	PERFUME A	30.00	0.0
11	65 P1 B	61	PERFUME B	10.00	0.0
12	65 P1 C	62	PERFUME C	10.00	0.0
13	64 WG 2	50	TOWER BASE POWDER	9399.81	0.0



Id	Unit	R.M. Code	Raw Material Description	Set Point (Kg)	Totalized (Kg)
3	62 CL 1	1	SODIUM SULPHATE	500.00	19922.2
4	62 CL 2	2	SODIUM CARBONATE	374.97	15262.0
5	62 CL 3	3	STPP	550.06	22494.2
6	62 CL 4	4	Component A	174.97	6900.1
7	62 CL 5	5	Component B	150.06	5966.3
9	62 WG 3	7	O.B.	2.5	100.0
11	62 WG 3A	9	MINORS	5.1	200.1
12	KV 63.5	10	WATER	958.1	39550.9
13	KV 63.8	11	MAIN SPARE	25.0	930.6
14	KV 63.10	12	SODIUM SILICATE	74.9	3257.1
15	KV 63.12/13	13	ACTIVE MATTER	54.7	2326.5
17	KV 63.6	15	SLS paste	25.0	997.1
18	KV 63.7	16	MINOR SPARE	50.0	2160.3
19	KV 63.9	17	RECOVERED SLURRY	538.8	22102.0
20	64 WG 3	51	ZEOLITE	120.0	2127.0
21	64 WG 4	51	ZEOLITE	50.0	1886.5

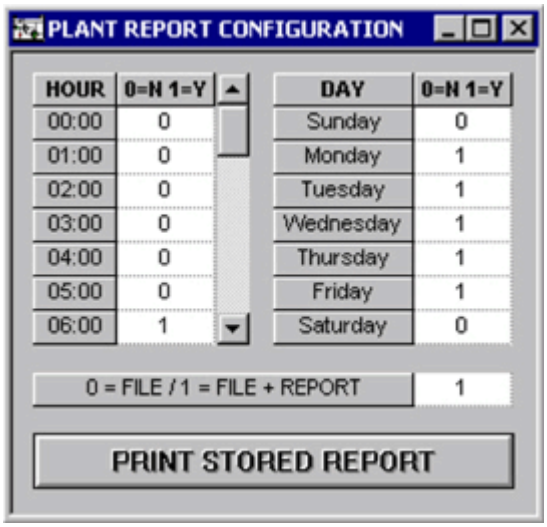
PLANT REPORT PRINT OUT

For printing the Plant report it's enough to request it by pushing the proper key, without any password.
This is an example for a typical plant print report.



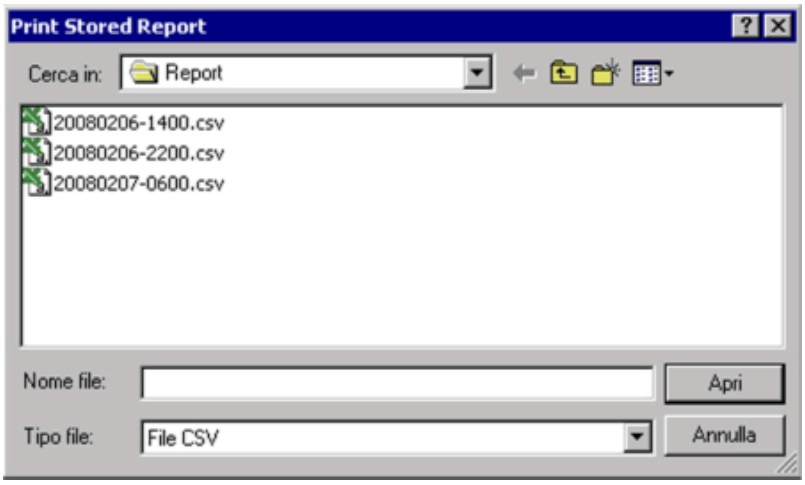
PERIODIC REPORT CONFIGURATION

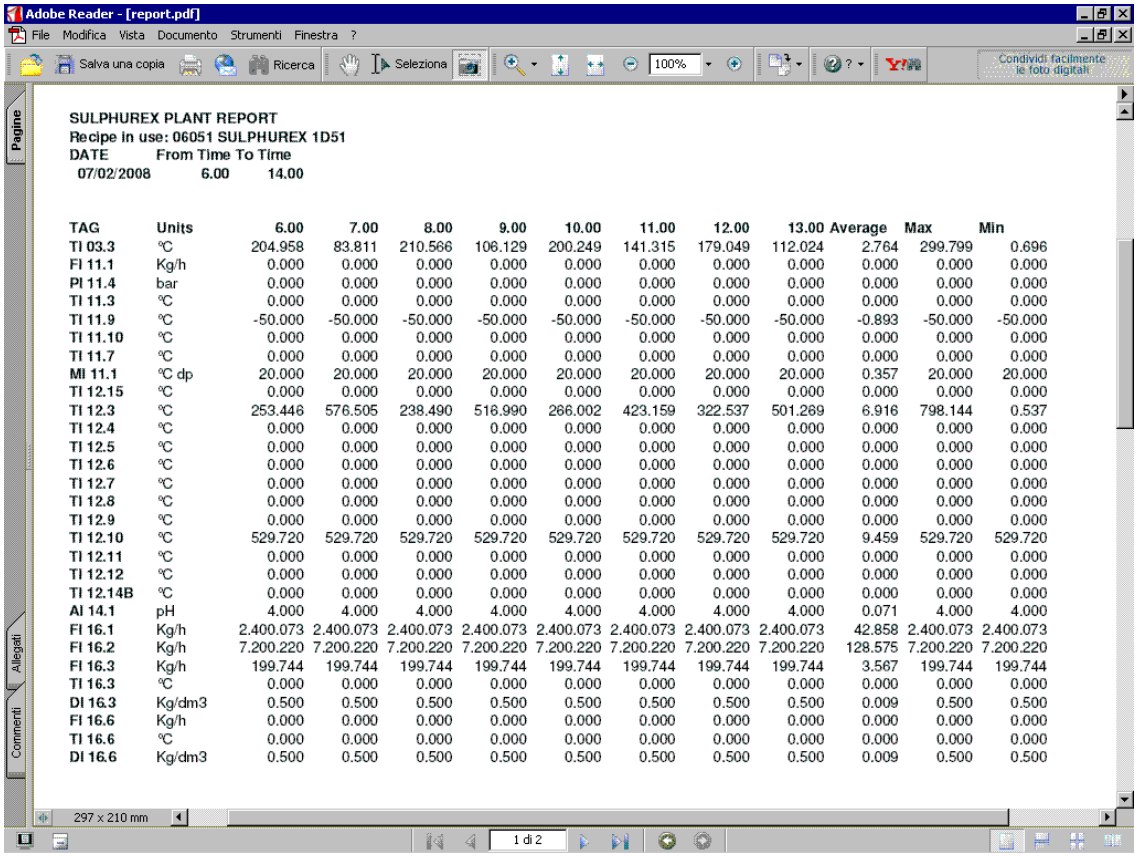
The Plant Report can be printed upon operator request or at determined and user programmable time intervals, configured in a dedicated windows:



In the next page you'll find a plant report example.

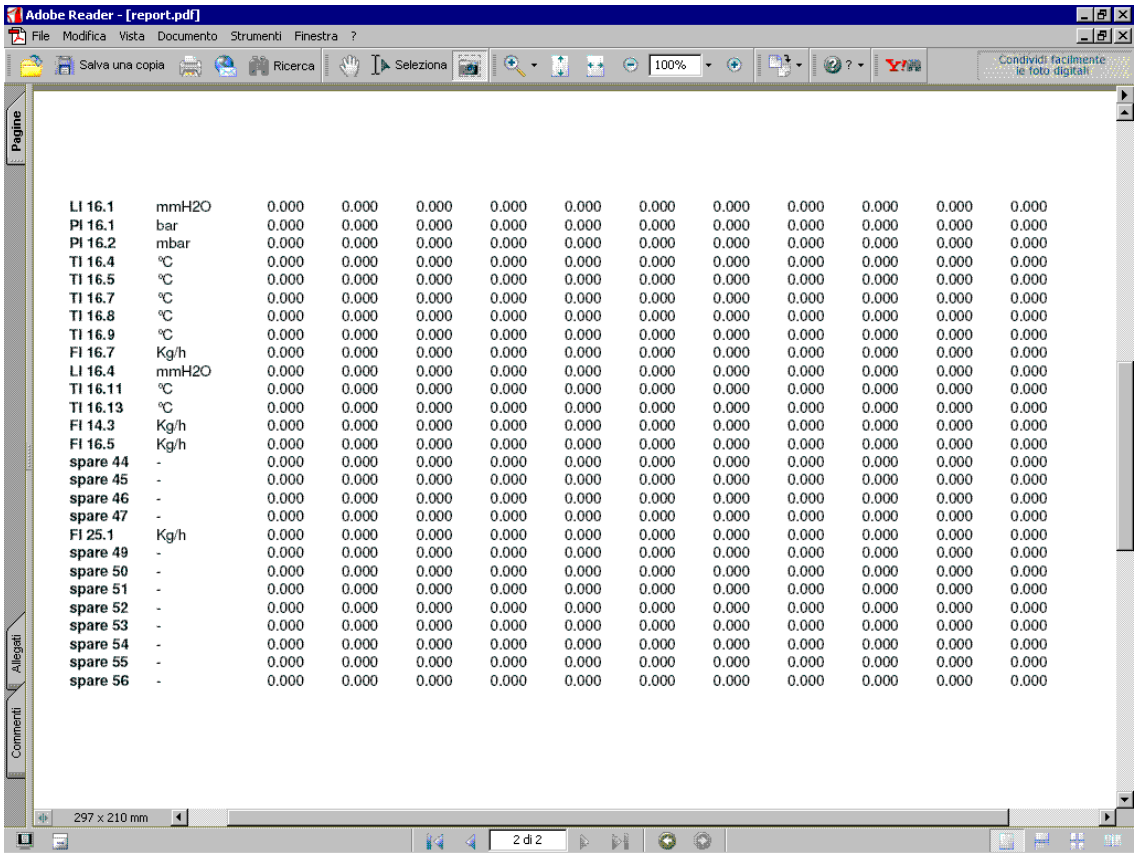
Use the Print Stored Report button for open a selection windows and print the older reports:





SULPHUREX PLANT REPORT
Recipe in use: 06051 SULPHUREX 1D51
DATE From Time To Time
07/02/2008 6.00 14.00

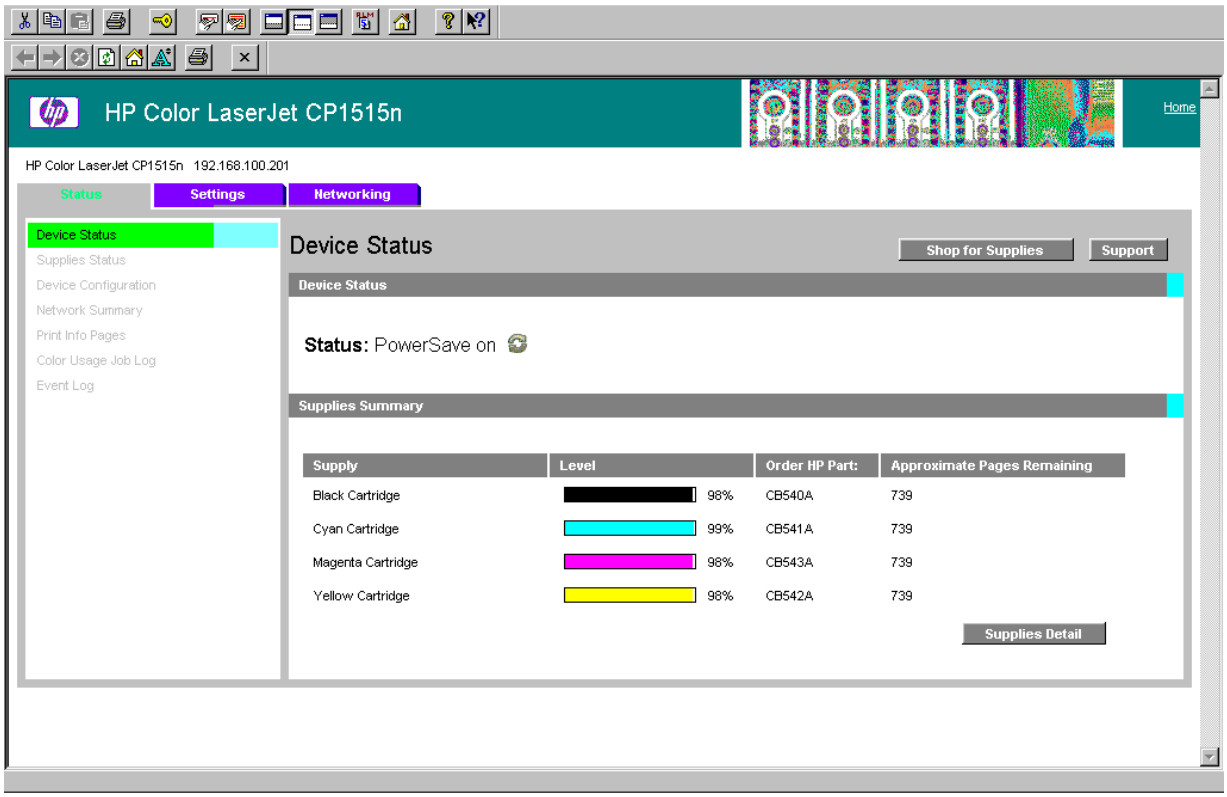
TAG	Units	6.00	7.00	8.00	9.00	10.00	11.00	12.00	13.00	Average	Max	Min
TI 03.3	°C	204.958	83.811	210.566	106.129	200.249	141.315	179.049	112.024	2.764	299.799	0.696
FI 11.1	Kg/h	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PI 11.4	bar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 11.3	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 11.9	°C	-50.000	-50.000	-50.000	-50.000	-50.000	-50.000	-50.000	-50.000	-0.893	-50.000	-50.000
TI 11.10	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 11.7	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
MI 11.1	°C dp	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000	0.357	20.000	20.000
TI 12.15	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.3	°C	253.446	576.505	238.490	516.990	266.002	423.159	322.537	501.269	6.916	798.144	0.537
TI 12.4	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.5	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.6	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.7	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.8	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.9	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.10	°C	529.720	529.720	529.720	529.720	529.720	529.720	529.720	529.720	9.459	529.720	529.720
TI 12.11	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.12	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 12.14B	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
AI 14.1	pH	4.000	4.000	4.000	4.000	4.000	4.000	4.000	4.000	0.071	4.000	4.000
FI 16.1	Kg/h	2.400.073	2.400.073	2.400.073	2.400.073	2.400.073	2.400.073	2.400.073	2.400.073	42.858	2.400.073	2.400.073
FI 16.2	Kg/h	7.200.220	7.200.220	7.200.220	7.200.220	7.200.220	7.200.220	7.200.220	7.200.220	128.575	7.200.220	7.200.220
FI 16.3	Kg/h	199.744	199.744	199.744	199.744	199.744	199.744	199.744	199.744	3.567	199.744	199.744
TI 16.3	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DI 16.3	Kg/dm3	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.009	0.500	0.500
FI 16.6	Kg/h	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.6	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
DI 16.6	Kg/dm3	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.500	0.009	0.500	0.500



LI 16.1	mmH2O	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PI 16.1	bar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
PI 16.2	mbar	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.4	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.5	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.7	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.8	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.9	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FI 16.7	Kg/h	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
LI 16.4	mmH2O	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.11	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TI 16.13	°C	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FI 14.3	Kg/h	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FI 16.5	Kg/h	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 44	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 45	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 46	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 47	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FI 25.1	Kg/h	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 49	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 50	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 51	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 52	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 53	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 54	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 55	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
spare 56	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

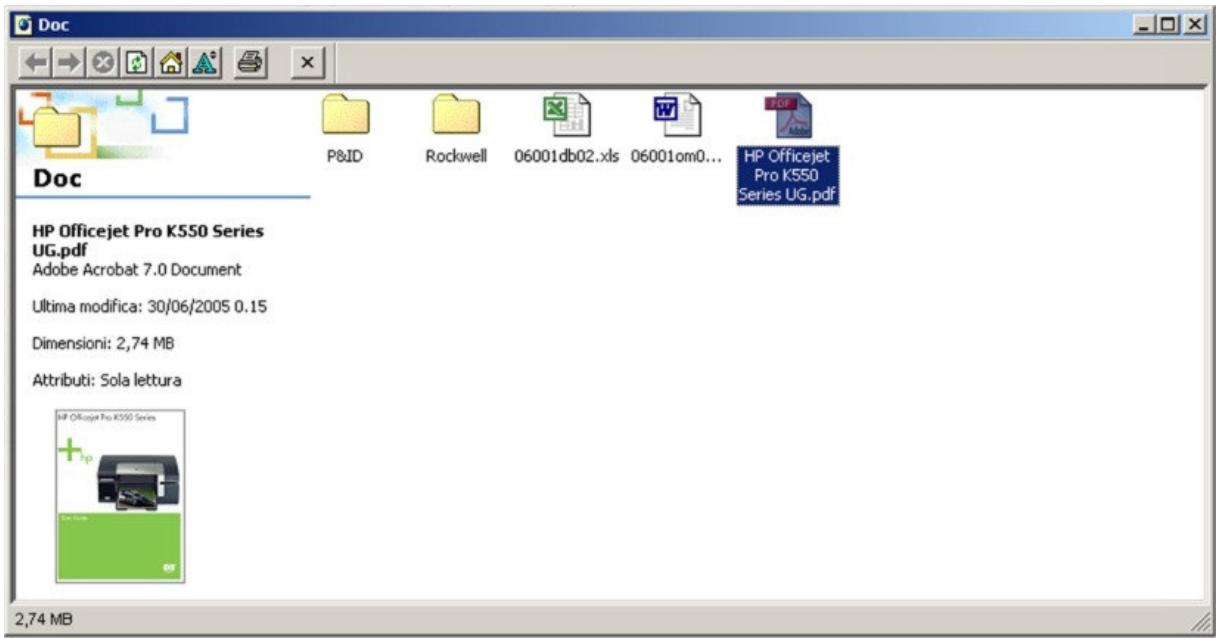
PRINT UTILITY

On this web section, it's possible to access directly at the control and configuration software on the printer.



DOCUMENTATION

In this page, using the appropriate tools and viewers, it's possible to read the documentation files:



So the operator will be able to read on line the Operator Manuals, PLC database and any other document.

The document called PLC database contains all the memory-maps on which is based the exchange of data between PC and PLC.