



QUICK MANUAL

Optima Control System

408152 (en)

Agrosec
Grain Handling



ANTTI-TEOLLISUUS OY

Koskentie 89

FI-25340 Kanunki, Salo

Tel. +358 2 774 4700

Fax +358 2 774 4777

E-mail: antti@antti-teollisuus.fi

www.agrosec.com

7.8.2013

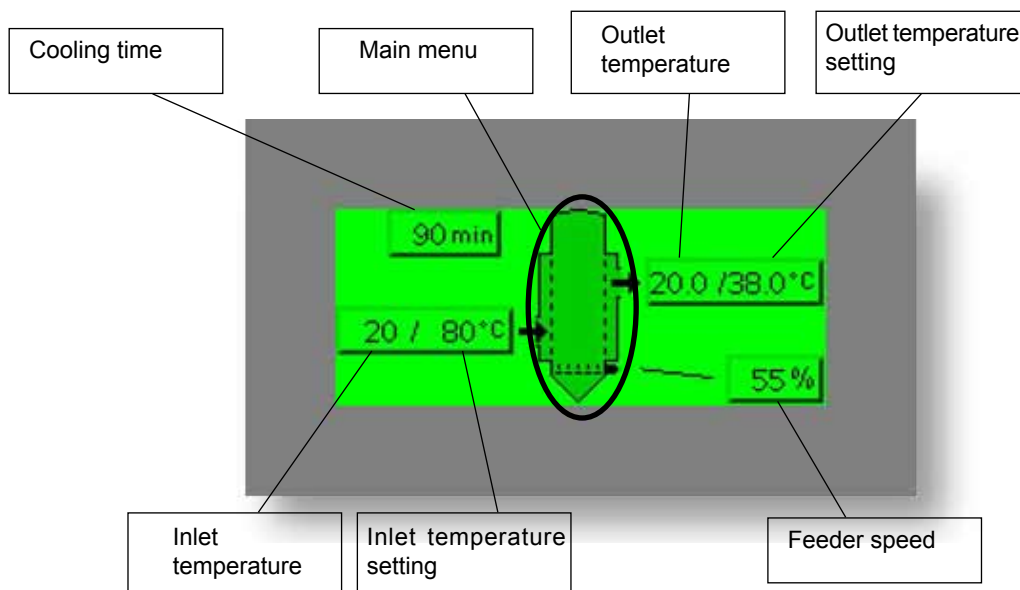
CONTENT

1. Main screen	3
1.1 Changing of values on main screen	3
2. Main menu	4
2.1 Functions	4
2.2 Batch data	4
2.3 Advanced features	5
2.4 Settings	5
3. Version	7
4. Manual mode	8
5. Automatic mode	8
5.1 Automatic filling (option)	8
5.2 Automatic drying	8
5.3 Automatic emptying (option)	8

1. Main screen

Most important process and setting values are shown on main screen. Remaining cooling time is shown during drying and cooling. Inlet and outlet temperatures are shown in format xx/yy°C, first is process value and second is setting. Feeder speed is percentage of frequency controlled feeder speed.

Touching of dryer icon on middle of the screen opens main menu. There is X-button on top-right on all screens, except main screen, which returns to mains screen.



1.1 Changing of values on main screen

Same technic works for cooling time, inlet temperature, outlet temperature and feeder speed. Touch the field of value and background of value turns black. Value can be now changed step by step with arrow buttons. Value can be changed also by retouching black background field, numeric keyboard opens now to display.

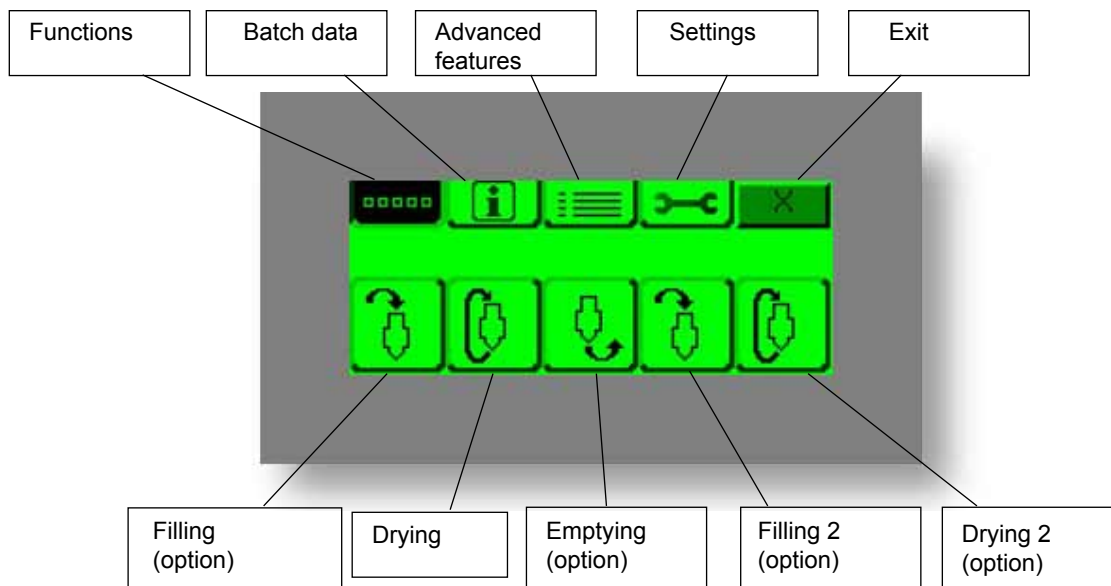


2. Main menu

Number of icon on main menu depends on selected options. Active tab on top of screen is shown by black background

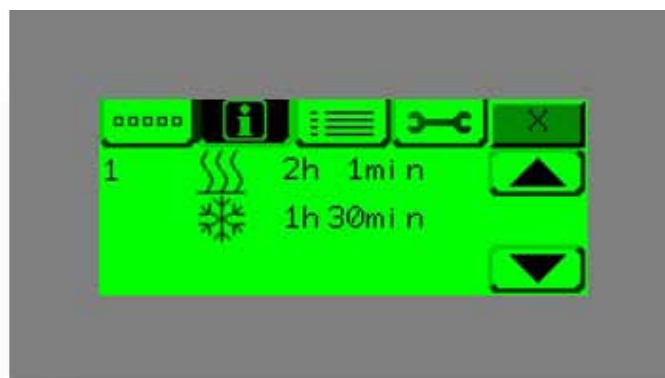
2.1 Functions

Icons on bottom of the screen are used to select function or combination of functions. Function can be selected by touching icon of function. Background of selected function or functions turns to black. When dryer is running, icon of active function is blinking. If there is not selected filling or emptying options screen below does not exist.

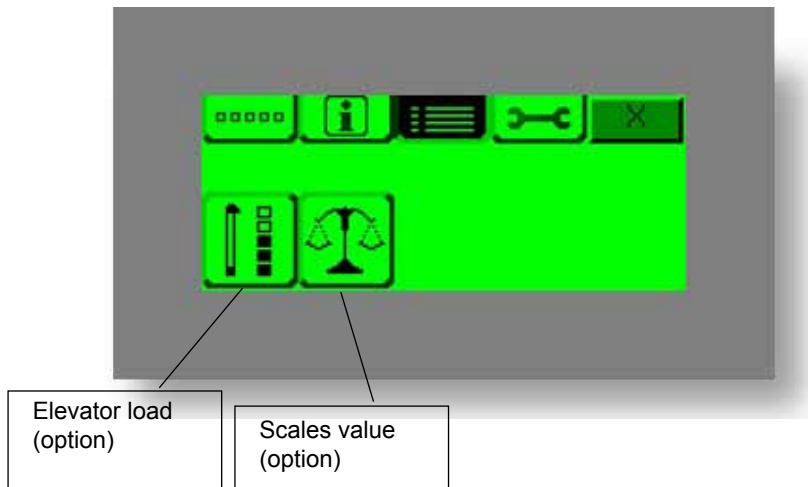


2.2 Batch data

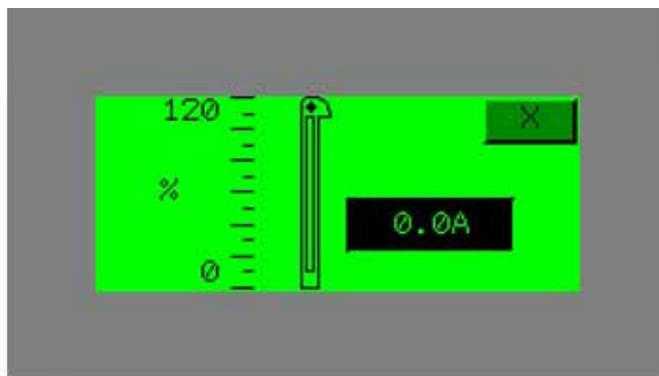
Batch data tab show drying and cooling times of last 10 batches. Batch number is shown on top-left and can be changed by arrow buttons.



2.3 Advanced features

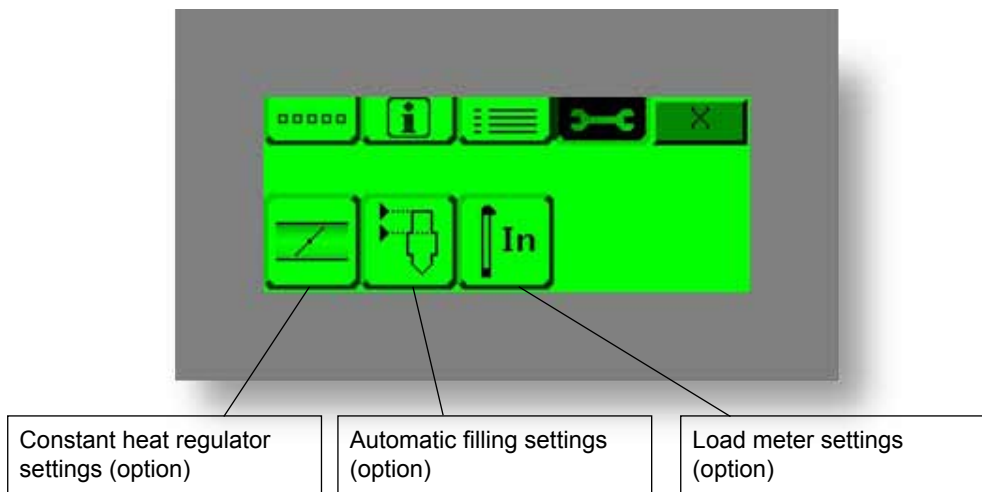


Elevator load meter shows elevator load as current and percentage of full load (option).

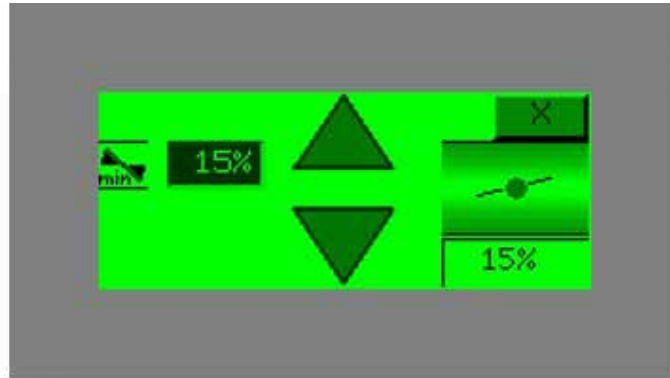


Scales value can be shown also on display (option)

2.4 Settings

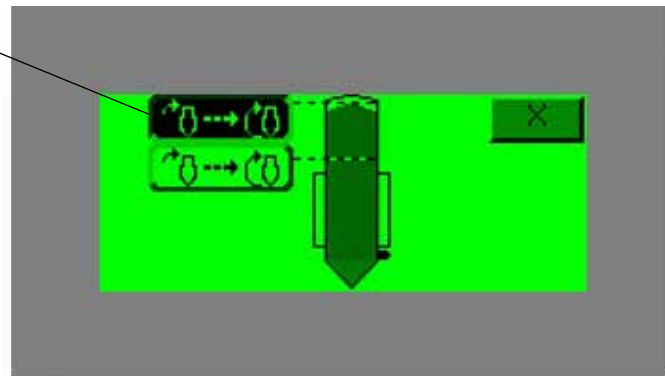


Closing percent of constant heat regulator (option) can be adjusted by this setting. 0% means fully open and 100% fully closed air shutter. Value of closing percent can be changed by arrow buttons. Closing percent setting can be used to limit air volume during drying and cooling.

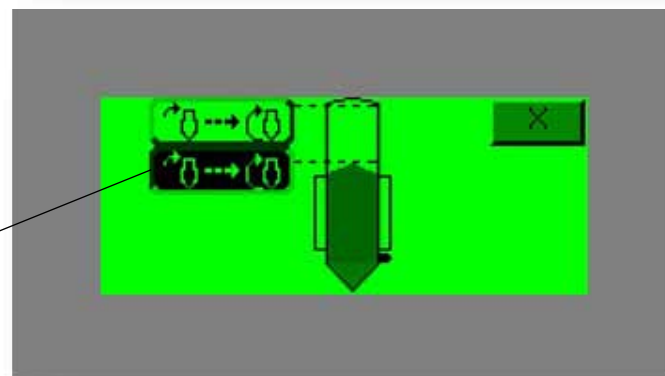


Setting of automatic filling (option) defines starting point of drying. If program with filling and drying functions is selected on functions screen, on settings it is possible to select start of drying when grain level reaches middle level sensor of top level sensor.

Drying start from top level sensor

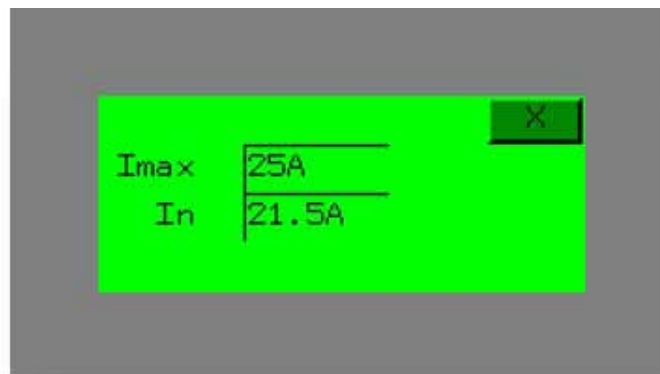


Drying start from middle level sensor



If start from middle sensor is selected, fan, feeder and burner starts sequentially when grain level reach middle level sensor. Also elevator shutter closes to middle limit switch. In case of filling conveyor relay contact closes to reduce speed of frequency controlled (option) conveyor. Filling end when grain level reach top level sensor and elevator shutter closes.

Settings of load meter (option)



Imax value is highest current of current transformer.

In value is rated current of motor.

3. Version

Version number is shown few seconds on start screen after switching mains on.





4. Manual mode

On manual mode all devices can be driven individually. Manual mode can be selected by turning mode switch to MAN position. Manual mode requires continuous monitoring by user. If dryer is filled manually elevator switch have to be on position 2 to stop elevator when grain level reach top level sensor.

5. Automatic mode

On automatic mode devices are controlled by automation system. Automatic mode can be selected by turning mode switch to AUTO position. All required switches of devices have to be on position 1. Automation system will start and stop devices sequentially in right order. Selected automatic program start when pressing start button.

5.1 Automatic filling (option)

Switches of devices to position 1. Select automatic filling from functions tab and press start button. Elevator start and elevator shutter open to top limit switch automatically.

When grain level reach top level sensor elevator shutter closes and elevator stops after delay automatically.

If filling and drying is selected on functions tab drying starts automatically after filling (Automatic filling settings).

5.2 Automatic drying

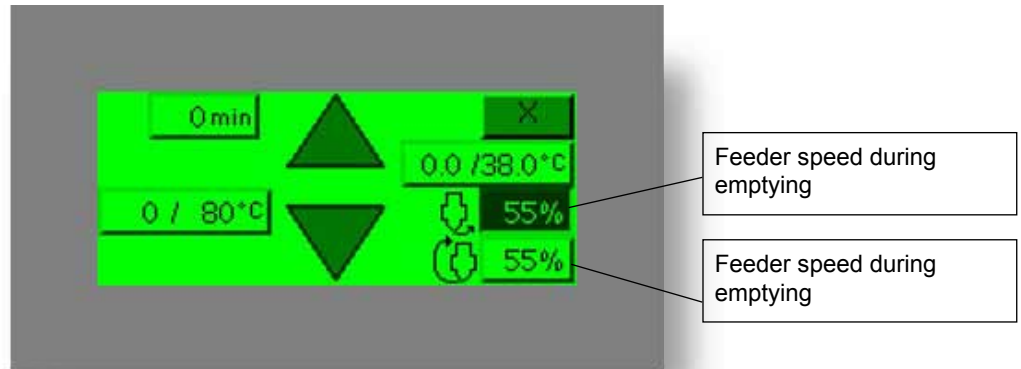
Switches of devices to position 1. Select automatic drying from functions tab and press start button.

Devices start sequentially. When outlet temperature reach setpoint value, drying turns to cooling mode.

5.3 Automatic emptying (option)

Emptying position of divider is selected by selector switch of divider. If ie. filling-drying-emptying program is selected, automation system select "dryer" position of divider automatically when filling and drying functions are active.

It is possible to pre-set feeder speed higher on emptying function. Feeder speed during emptying function can be set by pressing feeder speed field. System have to be on automatic mode and emptying have to be selected from functions tab, to make feeder speed during emptying field visible.



If grain level reach silo top sensor, screen below show up. When selected silo is full, emptying function can be quit or divider position can be changed to other silo and continue emptying.

