



Flamco

ENA 50-60 Appendix

Installation and operating instructions



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1. Commissioning

1.1. Commissioning ENA 50/60

Before commissioning make sure that the unit and its items of equipment are in conformation with the regulations that apply at the place of erection and in respect of the field of application. The party erection and operating the unit will be responsible for making the checks and for carrying out commissioning. For commissioning, the hydraulic and electric connections must be in place, and the shut-off devices open. It is advised to order a factory-installed thermal cut-out to prevent the system from return temperatures that rise above the permitted level.

1.2. Parameterisation for commissioning

The ENA50/60 comes with a pre-parameterised control. As this control offers a wide range of possibilities, you will have to set operating parameters so that they will be adapted to the concrete operating conditions of your heating/cooling system.

When the control is switched on, first 'ENA 50 or ENA 60' and after that the start screen appears on the display. Now it is possible to make a selection by turning and pressing the control knob.

Turn and press the control knob (on System, displayed against a black background) to get to the Selection menu. Select 'Entries' (code 000001) to get to the Equipment, Parameter and Service menus for carrying out parameterisation. Set up the control point by point - refer to the sections with explanations on the Hardware, Parameter and Service menu (ENA 50/60 - Installation and operating instructions).

Select 'Back' to return to or to complete menu items. For completely exiting submenus, you can also hold the control knob in the pressed state, causing the control to invoke the Process screen/START menu.

On completing the parameterisation of the control, confirm/press Start to get to the Process screen. The ENA 50 or 60 will then commence its operation.

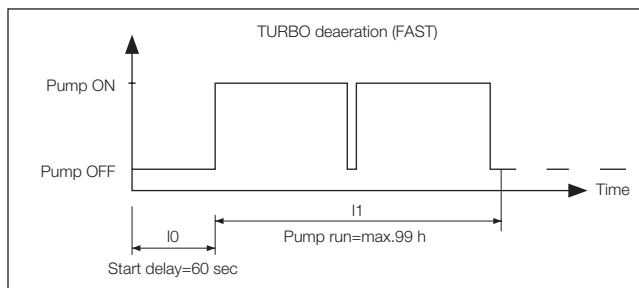
2. Items of the hardware and parameter menu

2.1. Operating modes

The operator can operate the system in the fast or normal deaeration mode. Service personnel have also access to hand mode, and can carry out a leakage test. This leakage test can also be used to test the ability to operate the pump.

2.1.1. Fast/Turbo

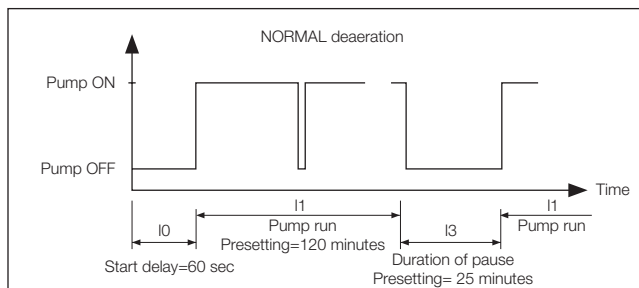
Pump running (with formation of low pressure) takes place alternately with the evacuation interval until the period of time selected for the fast mode expires. Then, the control automatically changes to normal mode. In I1 every 5 minutes the pump is switched off for 10 seconds.



2.1.2. Normal

The normal deaeration mode is only automatically interrupted by a pause to avoid possible deaeration noise during the night.

In I1 every 5 minutes the pump is switched off for 10 seconds.



2.1.3. Hand

The hand mode is intended exclusively for maintenance purposes, i.e. for checking the operation of the pump. The plant operator cannot access this mode.

2.2. Monitoring

It is the primary purpose of the monitoring functions to detect errors in the system at an early point of time and to protect the system components to the largest possible extent by means of appropriate signals or by automatically shutting down the system. They are particularly intended for detecting leakages at an early stage and to limit leakages.

2.2.1. Make-up quantity (monitoring)

This function is not relevant for the ENA 50/60. The make-up function is deactivated.

2.2.2. Pressure monitoring

The maximum allowable pressure and level should not be exceeded. Therefore, pressure deviations are signalled.

If the ENA 50/60 is not operated within the specified pressure range, it is automatically shut down, and an error message is shown. When the pressure is restored to the permissible working pressure range, the unit is automatically reactivated and continues to operate.

2.2.3. Monitoring of quantity of water to be treated

This function is not relevant for the ENA 50/60.



3. Menu descriptions

3.1. Hardware menu

ID number

Can be parameterised only by the manufacturer and service personnel.

Language

The operator can choose between 17 languages. English is the default setting on delivery.

Litres counter (IWZ)

This function is not relevant for the ENA 50/60.

Water treatment

This function is not relevant for the ENA 50/60.

Control mode

This function is not relevant for the ENA 50/60.

Control mode (Make-up mode)

This function is not relevant for the ENA 50/60. The make-up function is deactivated and not installed.

Operating mode

The unit is shipped from the factory with the fast mode activated. Upon expiry of the fast interval, the unit automatically switches to normal. However, the operator can change the operating mode at any time. The hand mode can be activated for servicing purposes only.

Sensor / Motor protection

Already been parameterised. Factory setting.

Common failure

If set to ON (item ticked), the common failure will be tripped upon the activation of the respective error message. The default setting is ON. It is possible to deactivate the following centralised fault alarm: 'Next maintenance'.

- Next maintenance: maintenance date has been reached. If it is set to ON, the centralised fault alarm will be tripped and the unit continues to operate. If set to OFF, no centralised fault alarm will be tripped.

3.2. Parameter menu

Item	Factory setting
Duration of turbo	
- Remaining fast run time up to automatic change to normal mode	99 hours
Pause normal degaz	
- Duration of pause between end of deaeration time and beginning of pump run	25 minutes
- Pause ON (beginning of night pause)	06:00 pm
- Pause OFF (end of night pause)	08:00 am
Deaeration	
- Pump run time (= deaeration time)	120 minutes
- Deaeration time break	10 seconds, every 5 minutes
- Lower pressure limit (lower working pressure limit)	ENA 50 -> 7,5 bar ENA 60 -> 10 bar
- Upper pressure limit (upper working pressure limit)	ENA 50 -> 15 bar ENA 60 -> 22.5 bar
- Special system pressure (irrelevant for the operator)	Factory setting
Litres counter (IWZ)	Not relevant for ENA 50/60
Water treatment	Not relevant for ENA 50/60
Filling quantity	Not relevant for ENA 50/60



Item	Factory setting
Time and date	Operator task
- Summer time on: starting month (summer time ON is 00 for regions without change between times)	03
- Summer time off: ending month (summer time OFF=00 for regions without change between times)	10
- Maintenance gap: maintenance interval 0 .. 800 days	365 days
- Pressure sensor min.value	0.0 bar
- Pressure sensor max.value	25.0 bar

Note that after a long power shut-off or deactivation of the controller, it may be necessary to make new entries.

3.3. Service menu

ID number

Factory settings; not be programmed by the operator.

Software version

Readable entry made by manufacturer.

Start

Enter the time and date of the start (traceability) by pressing Start. Before pressing, the date and time must have been correctly set.

Maintenance

The date of the next maintenance is indicated in parentheses. When this time is reached, the centralised fault alarm is optionally tripped, and a fault message is displayed to remind the operator. If it is acknowledged, it will be displayed again after seven days unless 'Maintenance done' has been pressed, thus indicating that the maintenance has already been carried out. The time and date of the last maintenance as well as the code level are indicated in the upper two lines.

Error list

Shows the last acknowledged 250 errors together with time and date.

Value statistics

Display of various statistic data.

Refill statistics

This function is not relevant for the ENA 50/60.

Deaeration statistics

This function is not relevant for the ENA 50/60.

Change entry code

Change to another access code. For the operator, only code 000001 is possible and required.

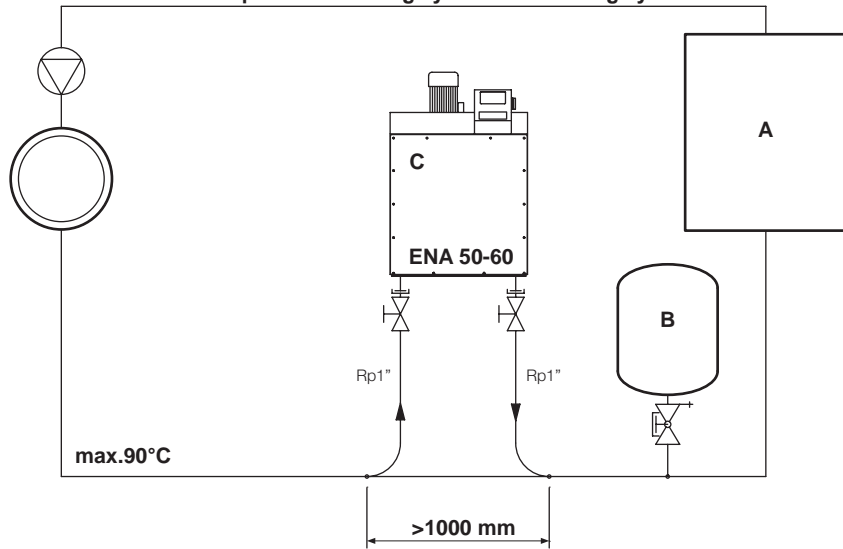
Data transmission

This function is not relevant for the ENA 50/60.



4. Examples

4.1. ENA 50/60 with a pressure holding system in a heating system



A	Heater
B	Pressure holding system
C	ENA 50/60

**Do not use nominal bores smaller than indicated for the lengths of the lines concerned!
The lines should be as short as possible!**

DN25 < 10 m
DN32 < 20 m
DN40 < 30 m



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operating instructions appendix