

1. System Administrator's Guide

1.1. Hardware and software requirements

Computer IBM PC with processor(s) supporting 32-x (x86) and 64-bit instructions x86, Intel64, AMD64.

Since version 2.15 the program is installed only on the 64-bit version operating system Microsoft Windows 7/8/10 with the package installed Visual C ++ Redistributable for Visual Studio 2015 x86 and x64 versions.

The minimum amount of free space for permanent memory (HDD \ SSD) is at least 1GB.

The minimum amount of RAM is 2GB (limitation of 64-bit operating system), 8GB is recommended. During the calculation, the program uses at least 50MB or more of RAM depending on the calculation model.

Hardware support (video card) of the standard of three-dimensional graphics OpenGL 1.2 and higher.

Graphic display with a resolution of at least 800x640.

The presence of a USB port version 1.0 and higher to install the key of electronic protection against unauthorized access (included in the package).

1.1.1. Additional requirements to Windows 7

1. Only 64-bit version OS;
2. Service Pack 1 should be installed;
3. Update for Universal C Runtime KB2999226;
<https://www.microsoft.com/en-us/download/details.aspx?id=49093> (for Windows 7 x64).
4. Microsoft Visual C++ 2015 Update 3 Redistributable x86;
5. Microsoft Visual C++ 2015 Update 3 Redistributable x64;
<https://www.microsoft.com/en-US/download/details.aspx?id=53587>.

1.1.2. Additional requirements to Windows 8

1. Only 64-bit version OS;
2. Update for Universal C Runtime KB2999226;
<https://www.microsoft.com/en-us/download/details.aspx?id=49082> (for Windows 8 x64).
3. Microsoft Visual C++ 2015 Update 3 Redistributable x86;
4. Microsoft Visual C++ 2015 Update 3 Redistributable x64;
<https://www.microsoft.com/en-US/download/details.aspx?id=53587>.

1.2. Program installation

To install the program to the front-end computer it is necessary to do the following:

1. Log in with rights of administrator.
2. Insert drive with software.
3. Run **Setup.exe**.
4. Follow all the instructions of the installation program.

During installation process it is necessary to define program location path, as well as folder name for the program menu. Besides, dongle drivers are installed in the course of program setup, if necessary. Distribution kit includes **Acrobat Reader** software for documents reading.

5. Insert dongle in parallel or USB port. Perhaps, a dongle driver launch will require a system reboot.

CAUTION: A dongle must be removed from the port during the installation process to avoid its damage.

6. Check system clock truth. Incorrect system time may cause impossibility of dongle operating.

7. To launch a program click a **Nozzle-FEM**  shortcut or **NozzleFEM.exe**.

In case the program is delivered by dealers of OOO "NTP Truboprovod", a registration card should be sent to activate a dongle. After receiving a dongle updating string use a dongle updating program.

1.3. Distribution kit

1. Flash drive with software containing the following:
 - a. **SETUP.EXE** - **Nozzle-FEM** program installation file;
 - b. **ACROBAT** - setup directory for **Acrobat Reader** — a program for preview and printout of documentation;
 - c. **SENTINEL** - setup directory for manual installation of the dongle.
2. License Agreement.
3. Registration card (for dealer supplies).
4. Dongles (per number of copies supplied) providing unauthorized access protection for **Nozzle-FEM** program.

1.4. Software copy protection

Nozzle-FEM program is protected from unauthorized copying. The protection works as follows: while program is running, some processed modules check a dongle availability and in case of its absence they will switch the program performance to demo mode.

There are two types of dongles: local and network ones (network dongles might be supplied when purchasing 2 or more licences of the program).

Local dongle enables program functionality on PC where it was inserted. It is possible to run several copies of the application on the same PC.

A network key provides a possibility of competitive access: the program may be launched on any computer in local network. Total number of running program copies is controlled by the dongle and is equal to the number of licences purchased. A network dongle might be inserted in any computer of local network (for instance, in server). Dongle drivers should be installed in the same computer. A dongle software uses TCP/IP protocol for network operation.

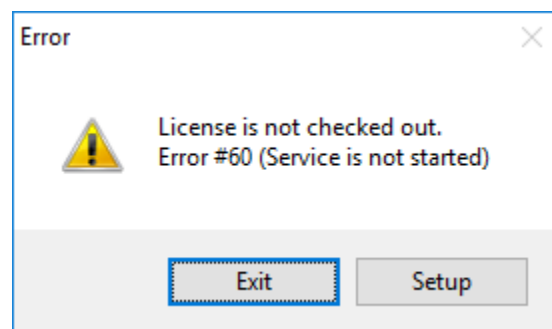


Fig. 1.1

The program might be set up for a definite dongle usage:

- **local** – a local PC dongle is used;
- **server** – a dongle on a certain computer (defined by IP-address) is used; searching for a free dongle: first a search is performed to find out a
- **any available** – local dongle, then, in case of its absence, all computers in local network are interrogated.

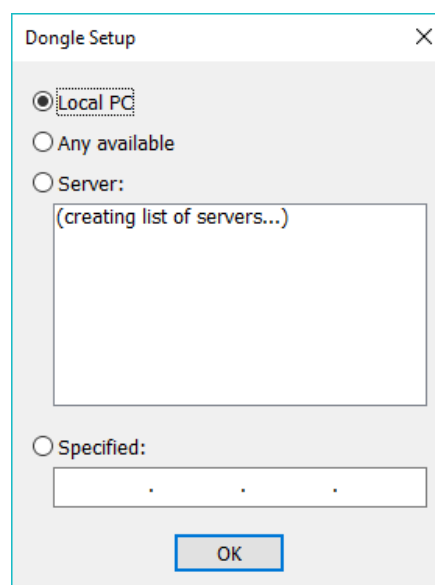


Fig. 1.2

For dongle settings use a dialog box, which may be opened by clicking **Customize** button (fig. 1.2) or selected in the menu **Options**→**Customize dongle access**. The program is set by default on usage of a local dongle.

For dongle activation or changing its settings in case of support period prolongation or license parameters changing a service program **KeySt.exe** is used. To run the program select consecutively **Start**→**Programs**→**Nozzle-FEM**→**Dongle Update**. Then a dialog box will open:

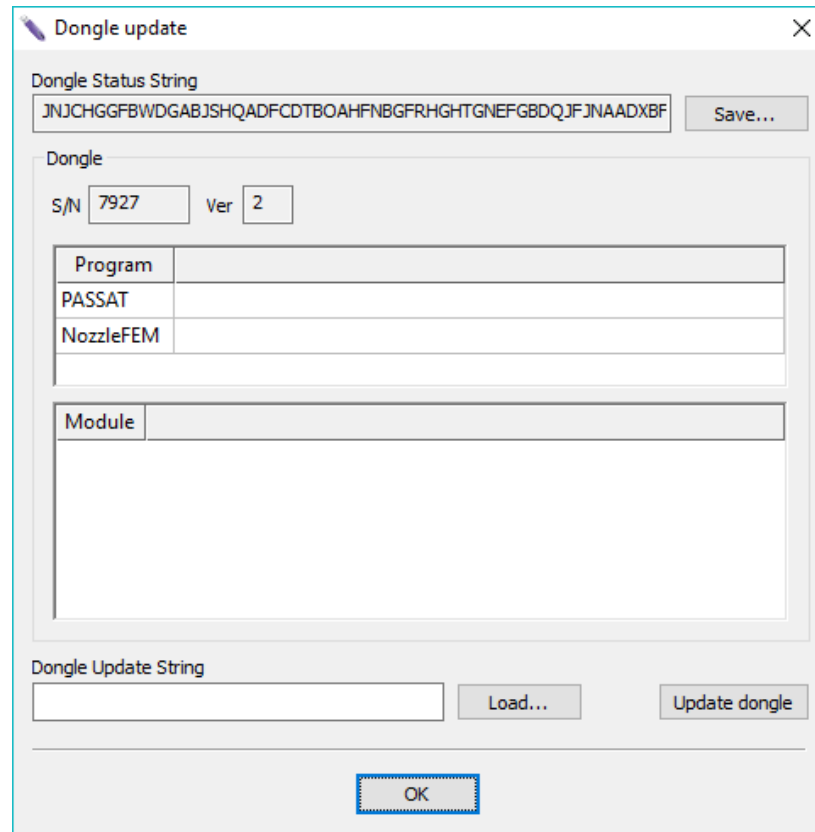


Fig. 1.3

A user should inform the original programmers about the code displayed in **Dongle status bar** dialog box (fig. 1.3). This code may be saved into the file by using **Save** button for further forwarding to the original programmers, by e-mail, for instance.

A dongle status bar is different at every program launch and can't be used repeatedly.

Later the original programmers will give a new code to be inserted in **Dongle status bar** dialog box. This code may also be inserted from the file using **Load** button. Then press the button **Update dongle**.