

Release Notes 2020



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Introduction

Welcome to FEFLOW 7.3 Update 5.

In this Release Note, you will find information about new features of FEFLOW, and what you need to know in order to install and get started.

Groundwater projects are becoming more and more demanding - requiring modelling software with more sophisticated capabilities than ever before. FEFLOW provides best-in-class technology for groundwater flow, contaminant, groundwater age and heat-transport simulations. With its efficient user interface and its yet unmatched range of functionality, FEFLOW has become a standard in premium groundwater modelling over the last 35 years.

FEFLOW 7.3 comes with an extended Python interface support unleashing unlimited model parameter descriptions and dependencies to arbitrary properties. The full tensorial representation of hydraulic conductivity has also been extended in order to allow for Python and/or IFM descriptions.

FePEST presents new Cloud computing functions allowing easy job deployments on the Azure Cloud.

System requirements

The recommended minimum system requirements are:

Fully supported Windows operating systems *	Windows 10 Pro, version 1909 (64 bit) Windows Server 2016 Standard (64 bit) Windows Server 2019 Standard (64 bit)
Processor	x64, 2.2 GHz (or higher)
Memory (RAM)	4 GB (or higher)
Hard disk	5 GB (or higher)
Monitor	Full HD (1920 x 1080)

Graphics adapter	>= 2 GB memory, >= 24 bit color, Shader version >= 1.30
File system	NTFS
Software requirements	Microsoft .NET Framework 4.7.2 or later

* Fully supported operating systems are systems that have been tested in accordance with MIKE's Quality Assurance procedures and where warranty and software maintenance agreement conditions apply.

Installation

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DHI License Management - If you are installing on a computer or server where you will also install the license file, please also install the DHI License Manager. It must be downloaded separately.

To install FEFLOW, please go to the 'windows' folder inside the 'FEFLOW' product folder and execute the 'start.exe' file either on the MIKE 2020 USB or from the downloaded, un-zipped installation files. Press the 'Install' button to begin installation.

To start the FEFLOW installation, please click on 'FEFLOW Program Files'. It is recommended to allow the setup program to check for the latest patch on the MIKE Powered by DHI website to avoid any known and already fixed bugs.

All necessary FEFLOW files and folders will be installed on your PC. Additionally, a FEFLOW entry in the Start menu is created, containing links to FEFLOW itself and some supporting programs

License file and dongle

To use FEFLOW software in licensed mode, please refer to the DHI License Manager Release Notes. ([License Manager Release Notes](#)).

Product invocation

To start FEFLOW, double click on the FEFLOW 7.3 icon on your desktop, or launch FEFLOW from the Windows Start menu and select the program you would like to start. Typically, this will be 'FEFLOW Standard (64-bit)' or the free viewer 'FEFLOW Viewer (64-bit)'.

Starting FEFLOW without a valid licence, it is recommended to switch to demo mode via Tools - License Setup in the main menu. This mode is indicated by the word 'DEMO' in the header of the FEFLOW application window. Running in demo mode, file loading and saving is limited to 2500 nodes.

Support

For general support, please refer to our [FAQ](#).

If you experience any difficulties, or if you have questions, please contact our Customer Success team by e-mail or phone:

Customer Success

DHI A/S
Agern Allé 5
DK-2970 Hørsholm
Denmark

mike@dhigroup.com

Tel: +45 4516 9333

You can also contact your local Customer Success team for support in your local language. You can find the list [here](#).

New features and fixed issues

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Release 2020 (FEFLOW 7.3.5)

Every new release of FEFLOW consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find short descriptions of the most significant news in Release 2020 (FEFLOW 7.3.5) below.

New features

Module/type	New feature
Interface	Unlimited number of user distributions (nodal / elemental) is now supported in GUI.

Fixed issues

Module/type	Fixed issues
Interface	Test for empty hysteresis indicator vector has been added. (Merged from FEFLOW 7.4.1)
Interface	Start panel has been removed due to performance issues in File I/O, instead panel was replaced by item under Help menu.
Interface	Creating border face selections.
IFM	ClfmPath has been fixed for supporting UTF-8 strings
Charts	Crash when exporting or display the reference time series from Hydraulic-Head Chart.
Expression Editor	User-defined kinetic reactions involving Reaction-rate parameter in the DFE.
Interface	Crash after adding new observation points to existing DAC files.
Interface	Crash after de-refining mesh.
IFM	Min. Hydraulic-Head Constraint could not be set via IFM (Python and C++).

Release 2020 Update 1 (FEFLOW 7.3.4)

Every new release of FEFLOW consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find short descriptions of the most significant news in Release 2020 Update 1 below.

New features

Module/type	New feature
Interface	PYTHON Support up to version 3.8
Interface	Time series can now be loaded in postprocessor.
FePEST	Improved handling of Internet Licences for PEST simulations.
FEFLOW	Process variables (head, concentration, temperature) and user data can now be edited in the postprocessor.
Mesh Inspector	Improved handling of Van Genuchten curves.
Interface	Improved support for Qt 5.12 under Windows, Ubuntu 18.04 and Centos/RHEL 7.x
FEFLOW	Improved handling of transient Cauchy boundary conditions.
FEFLOW	Improved consistency of outputs between FEFLOW 7.x versions due to significant code changes.
Interface	Corrected display of observation points.
FEFLOW	Improvements to the Kinetics expression editor.
Various	Numerous corrections and stability & performance enhancements, including: <ul style="list-style-type: none"> • 2D mass budget • Navigation in immersive view • Parameters for arbitrary DFE • Persistence of multi-species in budget panel • Handling of gaps in boundary conditions • Species ids in budget panels • Implementation of hm^3/a unit

Release 2020

Every new release of FEFLOW consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find short descriptions of the most significant news in Release 2020 below.

New features

Module/type	New feature
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Interface	PYTHON Support up to version 3.7
Kernel	PYTHON Support for tensor descriptions IFM Support for Tensor descriptions
FEPEST	Azure Cloud deployment support
Miscellaneous	Pre-simulation NAN checks Measured timeseries shown in head diagrams 3D view with cut-off Export observations points name Export of velocity components Hide parameters turned off in view components Unique names in view panel for different age species and multi-species Outliers made possible in Fringe mode