COMSOL QUICK INSTALLATION GUIDE

VERSION 3.4



How to contact COMSOL:

Benelux

COMSOL BV Röntgenlaan 19 2719 DX Zoetermeer The Netherlands Phone: +31 (0) 79 363 4230 Fax: +31 (0) 79 361 4212 info@femlab.nl www.femlab.nl

Denmark

COMSOL A/S Diplomvej 376 2800 Kgs. Lyngby Phone: +45 88 70 82 00 Fax: +45 88 70 80 90 info@comsol.dk www.comsol.dk

Finland

COMSOL OY Arabianranta 6 FIN-00560 Helsinki Phone: +358 9 2510 400 Fax: +358 9 2510 4010 info@comsol.fi www.comsol.fi

France

COMSOL France WTC, 5 pl. Robert Schuman F-38000 Grenoble Phone: +33 (0)4 76 46 49 01 Fax: +33 (0)4 76 46 07 42 info@comsol.fr www.comsol.fr

Germany

FEMLAB GmbH Berliner Str. 4 D-37073 Göttingen Phone: +49-551-99721-0 Fax: +49-551-99721-29 info@femlab.de www.femlab.de

Italy

COMSOL S.r.l. Via Vittorio Emanuele II, 22 25122 Brescia Phone: +39-030-3793800 Fax: +39-030-3793899 info.it@comsol.com www.it.comsol.com

Norway

COMSOL AS Søndre gate 7 NO-7485 Trondheim Phone: +47 73 84 24 00 Fax: +47 73 84 24 01 info@comsol.no www.comsol.no

Sweden

COMSOL AB Tegnérgatan 23 SE-111 40 Stockholm Phone: +46 8 412 95 00 Fax: +46 8 412 95 10 info@comsol.se www.comsol.se

Switzerland

FEMLAB GmbH Technoparkstrasse I CH-8005 Zürich Phone: +41 (0)44 445 2140 Fax: +41 (0)44 445 2141 info@femlab.ch www.femlab.ch

United Kingdom

COMSOL Ltd. UH Innovation Centre College Lane Hatfield Hertfordshire AL10 9AB Phone:+44-(0)-1707 284747 Fax: +44-(0)-1707 284746 info.uk@comsol.com www.uk.comsol.com

United States

COMSOL, Inc. I New England Executive Park Suite 350 Burlington, MA 01803 Phone: +1-781-273-3322 Fax: +1-781-273-6603

COMSOL, Inc.

10850 Wilshire Boulevard Suite 800 Los Angeles, CA 90024 Phone: +1-310-441-4800 Fax: +1-310-441-0868

COMSOL, Inc. 744 Cowper Street Palo Alto, CA 94301 Phone: +1-650-324-9935 Fax: +1-650-324-9936

info@comsol.com www.comsol.com

For a complete list of international representatives, visit www.comsol.com/contact

Company home page www.comsol.com

COMSOL Quick Installation Guide © COPYRIGHT 1994–2007 by COMSOL AB. All rights reserved

Patent pending

The software described in this document is furnished under a license agreement. The software may be used or copied only under the terms of the license agreement. No part of this manual may be photocopied or reproduced in any form without prior written consent from COMSOL AB.

COMSOL, COMSOL Multiphysics, COMSOL Reaction Engineering Lab, and FEMLAB are registered trademarks of COMSOL AB. COMSOL Script is a trademark of COMSOL AB.

Other product or brand names are trademarks or registered trademarks of their respective holders.

Version:

October 2007

COMSOL 3.4

Before You Begin

CHECK SYSTEM REQUIREMENTS

Make sure your system satisfies all applicable requirements. Go to http://www.comsol.com/products/requirements/ to check our requirements list.

OBTAIN LICENSE FILE OR PASSCODE

Have your license file or passcode (Windows and Mac installations only) ready.

A passcode has a form similar to:

FFFFF-CUSV-123456-1234567-123456789

You need a license file or a passcode to install COMSOL 3.4. You should have received it in an e-mail or letter from your sales representative. If you have not received a passcode or a license file, contact your local COMSOL representative.

LICENSE SERVER INSTALLATION NEEDED?

Some COMSOL license types require that you also install a license manager before running a COMSOL software product. If you install COMSOL software with a passcode, no license manager is needed. If you install it with a license file, you need to install the license manager if the license file contains a line starting with the word SERVER. Please see the section "License Manager Installation" on page 24 in the COMSOL Installation and Operations Guide.

NEED MORE INFO?

For complete installation instructions, information about installing and running the COMSOL software with various license options, license manager, and client/server configurations, system requirements, and license error troubleshooting, see the *COMSOL Installation and Operations Guide*, which is included as a PDF file on the installation DVD or CD 1. It is also available in the COMSOL Help Desk after installation in HTML and PDF formats.

Also see the COMSOL Support Knowledge Base at www.comsol.com/support for up-to-date information about specific issues that might concern certain hardware or operating system versions.

Installing COMSOL 3.4 on Windows

- I Before starting, make sure you have administrative privileges.
- 2 Insert the COMSOL 3.4 DVD/CD 1 into the DVD or CD-ROM drive. The **COMSOL Setup** window should appear automatically; if not, run the file setup.exe on the installation CD.
- **3** Click the **New Installation** button.

10 COMSOL 3.4 Installer		
COMSOL INSTALLER		1 COMSOL
	Language:	[English 🔹]
New Installation Male a new COMSOL 3.4 installation.		
Add/Remove Features Change which features are installed or repair installation.		
Change License Change license and add/remove features.		
Uninstall COMSOL 3.4 Remove COMSOL 3.4 from this computer.		
View install.pdf		Cancel

- **4** Continue with the installation according to the instructions that appear. If you install using CDs, be prepared to eject CD 1 from the CD-ROM drive Then follow the instructions in the dialog box and insert CD 2, CD 3, and so on.
- **5** When the installation is complete, you get a chance to view the installation log. Click **Finish** to exit the installation program.

Installing COMSOL 3.4 on Linux and Sun

- I You need root privileges to install COMSOL in a system directory. You may also need root privileges to mount the CD-ROM.
- **2** The COMSOL installer is an X-windows application so you need to be logged in with access to an X-windows display.
- 3 Insert the COMSOL 3.4 DVD/CD 1 into the DVD or CD-ROM drive. If the CD is not mounted automatically by your operating system, use the mount command to mount the CD.
- 4 To start the installation, enter the command sh /mnt/cdrom/setup

The path /mnt/cdrom is the mount point of the CD-ROM drive.

- **5** Continue with the installation according to the instructions that appear. If you install using CDs, be prepared to unmount and eject CD 1 from the CD-ROM drive when the corresponding dialog box appears. Use the unmount and eject commands to unmount and eject the CD. Some Linux and Sun configurations automatically unmount and eject the CD when you press the CD drive button. Insert CD 2, CD 3, and so on, making sure that the CD is mounted, and click **OK**.
- 6 When the installation is complete, a Finish windows appears. Click Finish to exit the installation program. The installation program writes an installation log to the text file comsolsetup.log in the COMSOL installation directory.

Installing COMSOL 3.4 on Mac

- I You need administrative privileges to install COMSOL in a system directory.
- 2 Insert the COMSOL 3.4 DVD/CD 1 into the DVD or CD-ROM drive. Launch the COMSOL Installer application from the Finder. The COMSOL 3.4 Installer window appears.
- 3 Click the New Installation button.



- **4** Continue with the installation according to the instructions that appear. If you install using CDs, be prepared to eject CD 1 from the CD-ROM drive Then follow the instructions in the dialog box and insert CD 2, CD 3, and so on.
- **5** When the installation is complete, you get a chance to view the installation log. Click **Finish** to exit the installation program.

Getting Started

In addition to this manual, we supply many other resources to help you get the most out of COMSOL products.

COMSOL Multiphysics Quick Start and Online Help

The easiest way for new users to get an overview of COMSOL Multiphysics' capabilities and how to use them is to read the *COMSOL Multiphysics Quick Start and Quick Reference* manual. Further, the full COMSOL documentation set is available on your computer in the COMSOL help resources and as a set of PDF files. In the COMSOL Multiphysics user interface, choose **Help Desk** (HTML/PDF) from the **Help** menu to access all documentation. To get started with COMSOL Script, have a look at the *COMSOL Script User's Guide*.

The model libraries in COMSOL Multiphysics and the modules provide many fully-documented example models that you can study to learn about modeling techniques and to use as starting points for your own models. To open models, click the **Model Library** tab in the **Model Navigator**, which is the dialog box that appears when you start COMSOL Multiphysics. Click the **New** tab to create a new model by first choosing the space dimension and then one or more application modes for the types of physics or equations that you want to model.

(loder clorery ober	Models Open Settin	gs			
Space dimension:	2D	•	Multiphysi	cs	
Convection and Diffusion Convection and Diffusion D Diffusion Electromagnetics Conductive Media DC Electromagnetics Conductive Media DC Conductiv		Ad Remove Geom1 (2D) Geom1 (2D) Geom2 (2D) G			
AC Power Electro Fluid Dynamics fluid Dynamics Steady-state Transient an	omagnetics lavier-Stokes e analysis alysis		 ↓ Depender 	m nt variables: T	•
Heat Transfer Convection and Conduction Transient analysis			Application Mode Properties		
			Add Geometry		
•	III .	E F		Add Frame	
Dependent variables: T2			Ruling appli	cation mode:	
Application mode name:	ation mode name: cc2		Incompressible Navier-Stokes (ns)		
	Element: Lagrange - Quadratic 🗸		Multiphysics		

Technical Support

If any questions arise regarding COMSOL software products, do not hesitate to contact your local COMSOL representative or send your questions to support@comsol.com.

Further, at www.comsol.com/support you can find a broad range of technical support resources including the searchable COMSOL Knowledge Base.

Running COMSOL Multiphysics

On Windows, you find COMSOL program icons on the desktop and by pointing to **COMSOL 3.4** on the **Start** menu.

On Mac, the COMSOL programs are available in the **COMSOL34** folder, which you find in the **Applications** folder.

On Sun an Linux, run the comsol command to start COMSOL Multiphysics and the comsol script command to start COMSOL Script.

For further information about the COMSOL commands, available client/server options, and about running the COMSOL software in parallel, see the *COMSOL Installation and Operations Guide*.