



CADMOULD & VARIMOS

by SIMCON

SYSTEM REQUIREMENTS

Minimum requirements and recommended hardware
for CADMOULD v13

System Requirements v13

Introductory remarks

CADMOULD's simulation computations are extremely **efficient and fast, and they scale exceptionally well** when running multiple simulations, thanks to our proprietary **3D-F algorithm** and sophisticated algorithmic optimization under the hood. Most of our customers find that they do not need to acquire new hardware to use CADMOULD, since in most cases the same hardware they use for CAD software is also fully sufficient for CADMOULD. But of course, as with all software, the faster your hardware, the faster CADMOULD and VARIMOS will run.

When it comes to the CPU, two things are of particular importance: the single-thread speed and the number of processor cores. In addition, a larger working memory and an SSD as fixed memory have positive effects on the simulation speed.

Single-Thread Speed

Each individual simulation is, for the most part, executed on a separate, dedicated computer core – based on a cost-benefit assessment of CPU loading. As a result, the **single-thread performance** of the CPU, as well as the speed of **memory throughput**, are important drivers of individual simulation speed.

Number of cores

Since each individual simulation runs mostly on a dedicated processor core during simulation time, **variant calculations can be parallelized spectacularly well** with CADMOULD, because each can run on a separate, dedicated core. This means that CADMOULD's 3D-F's single-simulation speed advantage vs. competing algorithms actually multiplies, if you run several simulations at once, since the calculations can be performed in parallel. This is a real advantage of CADMOULD: many competing algorithms already spread their load across multiple cores for a single computation. With such methods, scaling to multiple parallel computations will be significantly slower. Running 2 calculations will then take at least twice as long. With CADMOULD, on a performant multi-core processor, it often makes only a minor difference in terms of total processing time, whether you run just one or several calculations in parallel. Running 4 or even 8 simulations simply does not take 4 or 8 times as long!

To harness **CADMOULD's unique scaling benefits**, we recommend that you use a solving computer (whether local or server) that has **several cores**, each with **good single thread speed**.

System requirements and recommendations CADMOULD® or VARIMOS® workstations (local or floating)

These are computers where you do both pre- and postprocessing, and also run simulations on the same hardware.

Software:

Operating system:	64 Bit-System: Windows® 10 + 8 + 8.1 We recommend: Windows® 10 64 Bit
Other:	Browser (e.g. Microsoft Edge, Chrome, Firefox) to create automatic reports Microsoft Office (COM-enabled) to create reports in Powerpoint or Word format

Hardware

CPU:	Runs on all current Windows® - compatible 64-bit x86 architecture processors (Intel or AMD) We recommend: fast 64-Bit multicore CPU, e.g. AMD Ryzen 5xxx Serie, Intel Core i5, i7, i9, or Xeon of the most recent generation, ≥ 4 GHz, ideally with ≥8 Cores / 16 Threads
Memory:	Required: 4 GB RAM We recommend: 16 GB or more
Graphics card:	≥ 1 GB MEMORY, must support OpenGL
Hard drive:	≥ 500 GB We recommend: 1 TB
Other:	USB port for hardware dongle, optional: SpaceNavigator™ (3D Connexion®)

System requirements and recommendations CADMOULD® or VARIMOS® S/C Server

Servers are computers in your network, which are used purely to run / solve simulations. Pre- and postprocessing is done on client computers on the network, and they send off their computation jobs to the server.

Software:

Operating System: 64 Bit-System: Windows® 10 + 8 + 8.1
We recommend: Windows® 10 64 Bit

Hardware

CPU: Runs on all current Windows® - compatible 64-bit x86 architecture processors (Intel or AMD)
We recommend: fast 64-Bit multicore CPU with at least 4 cores, e.g. current-generation Intel Core i5 / i7/ i9 / Xeon, or AMD Epyc / Ryzen 5xxx / Ryzen Threadripper

Memory: Required: 16 GB RAM
We recommend: 64 GB or more

Hard drive: \geq 500 GB
We recommend: \geq 1 TB SSD

Other: USB port for hardware dongle

System requirements and recommendations CADMOULD® or VARIMOS® S/C Client

Clients are computers in your network, which are used purely for pre- and postprocessing, i.e. for setting up simulations and for looking at the results. They send off their computation jobs to a server, who computes the simulations remotely, and sends back the results for viewing on the client.

Software:

Operating System:	64 Bit-System: Windows® 10 + 8 + 8.1 + 7 We recommend: Windows® 10 64 Bit
Other:	Browser (e.g. Microsoft Edge, Chrome, Firefox) to create automatic reports Microsoft Office (COM-enabled) to create reports in Powerpoint or Word format

Hardware

CPU:	Runs on all current Windows® - compatible 64-bit x86 architecture processors (Intel or AMD)
Memory:	Required: 4 GB RAM We recommend: 4 GB
Graphics card:	≥ 1 GB MEMORY, must support OpenGL
Hard drive:	≥ 500 GB We recommend: 1 TB
Other:	USB port for dongle, optional: SpaceNavigator™ (3D Connexion®)