

**FINE
SANI**



Water Supply & Sewerage Design



Integrated Workstation for Sanitary Design

FINE SANI performs Design and Calculations in a Fully **IN**tegrated **E**nvironment, making all the required calculations for any Sanitary Building Installation directly from drawings, therefore producing automatically all the study results: Calculation sheets, technical reports, bill of materials and costing, as well as all the final drawings (plan views, panel diagrams, details) fully updated.

FINE SANI consists of two Components, synergistically interacting between each other:

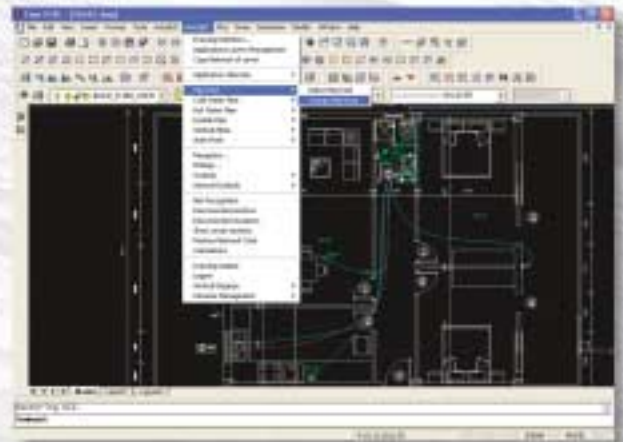
- The CAD Component, a powerful autonomous tool (based on IntelliCAD), including a flexible cad interface for designing the installation plus an expert system for producing the final drawings (plan views of the installation, vertical diagram, construction details etc).
- The Calculations Component, an advanced calculation environment, using a spreadsheet-like functionality and a rich methodological background. It provides all the calculation results of the Water Supply and Sewerage networks, in a perfectly presented and completely documented way.

Additionally to the two above components, FineSANI includes also an intelligent wizard, which defines visually the installation and then produces the vertical diagram along with the full calculations in just few seconds.

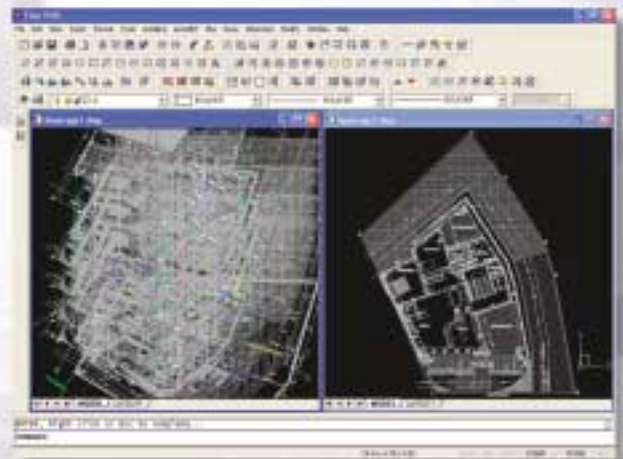
✓ Advanced CAD Interface

FINE SANI embeds an advanced CAD interface for designing any building sanitary installation in two simple steps:

- Location of the Installation components (hydraulic receptors, collectors etc) on the floor plan
- Piping design with simple or more sophisticated routing commands (i.e. "Pipes Parallel to Wall", "automatically connected to the receptors" etc) that speed up the process.



The view plan can be in any DWG or DXF file format or even taken from a scanner (bitmap file). Also the Architectural plan can be drawn from scratch through the AutoBLD (Architectural) commands of the package.



Max Velocity (m/s)	Water Velocity (m/s)	Type of Fittings	Fittings friction (m/WG)	Pipes friction (m/WG)	Total Friction Loss (m/WG)	Circuit Polar Angle	Pumps
2	1.097	F-1	0.041	0.455	0.496		
2	1.184	F-2	0.243	0.043	0.286		
2	0.896	F-3	0.448	0.018	0.466		
2	1.038	F-4	0.434	0.470	0.904		



Complete Calculations directly from the Drawings

The calculations Components (Water Supply and Sewerage – the latter including also the rain water ducts) are automatically updated from the installation drawings through the AutoNET group of commands. The networks are recognised and transferred into the calculation sheets. Calculations rely on a rich Methodological background, based on International and European standards.



Besides the piping calculations FineSANI calculates all the necessary equipment (i.e. the Pressure assembly if needed for the Water Supply installation, or the Sewerage elevation tank and pump for the Sewerage etc), as well as the bill of the materials, technical descriptions/specifications and other results. All the calculation outputs are properly organized and completely documented.



An alternative way to get the calculations is provided through the intelligent FineSANI wizard. The user describes the Sanitary installations in a visual way, through the existing templates (slides) and then the wizard generates the vertical diagram plus the results of the calculations.

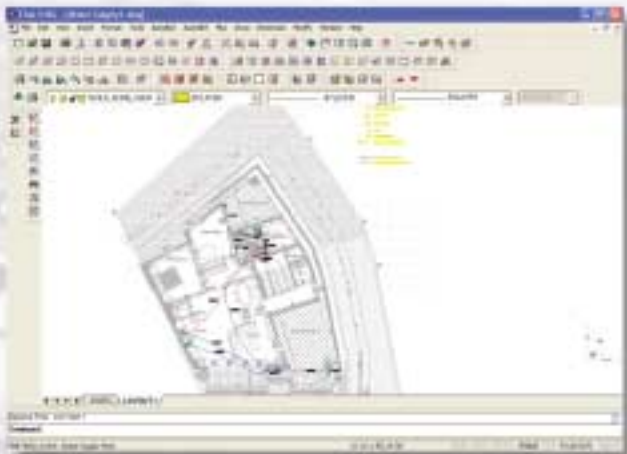


Automatic production of all project drawings

All project drawing are automatically created in a final form:

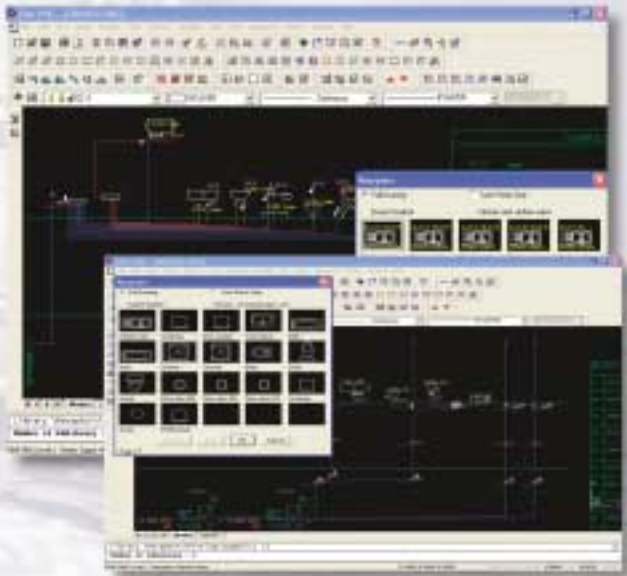
Detailed View Plan Drawings

Fully updated according to the calculation results.



Vertical Diagrams

They include all the information and can be edited by the user.



All the drawings can be edited and enriched, using the special utilities and the symbol libraries which are open to the user.



FINE is the Building Services Package of the Integrated 4M Suite, which supports the close cooperation among the Architect, the Civil Engineer and the Mechanical/Electrical Engineer, during all the stages of the Building design process.

5 + 1 reasons for working with FINE-SANI

- Global Design based on Object Oriented Programming (OOP) philosophy, Implemented with the most advanced tools (C++) and a long-range software engineering technology.
- Autonomous CAD (including IntelliCAD with its user license) providing full independency from other CAD environments, but keeping the most popular CAD standards and open dwg communication.
- Work on real 3D model of the project (building plus sanitary installation networks) from the beginning to the end. Unlimited freedom to create and modify, through parametric dialog boxes, due to the object structure of the whole information.
- Seamless Integration between the CAD Component and the Calculation Components (Water Supply & Sewerage), plus Interactive Communication between drawings and spreadsheets.
- Calculation environment based on a rich and reliable methodological background, adopting the most modern techniques and standards. Results completely documented and perfectly presented.
- 4M-Suite Supports the close cooperation between the Mechanical Engineer and the Architect, Civil Engineer and Electrical Engineer, during all the stages of the Building Design process.

FUEL



www.4msa.com

9 Mikion str.
152 33 Chalandri
Athens, Greece
Tel.: (+30) 210 6857200
Fax: (+30) 210 6848237
gen@4m.gr

