

Gas network calculation, from drawing to report

Draw the distribution network on the map, compute pressures and flows, check the code limits per pipeline class, size the diameters and generate the calculation report as a PDF. All in the browser, nothing to install.

Try it free during the beta: app.gasnetics.com

Everything the designer needs

For HVAC engineers, industrial technicians and firms that design gas distribution networks.

Map-based drawing

Cartographic editor: supply points, delivery nodes, pipes, isolation and non-return valves, pressure reducers. Ground elevations filled in automatically.

Hydraulic calculation

Renouard formula and nodal method with Newton-Raphson iteration: node pressures, pipe flows and velocities, automatic handling of reducers and valves.

Compliance checks

Maximum velocities and minimum pressures per pressure class, with the Italian classification (1st–7th species) built in and configurable standard profiles for your own scheme.

Automatic sizing

Diameter selection from commercial catalogues (PE, steel, or your own custom pipes) to satisfy every check with the smallest diameter.

Any distributed gas

Methane, grid natural gas, LPG, biomethane, hydrogen blends: free molar composition, viscosity correction for H₂-rich blends, altitude correction.

PDF calculation report

Network plan on a cartographic base, methodology, full results, verification outcome, pressure profile along the critical path, bill of quantities. DXF export for CAD too.

Large networks

A high-performance numerical solver handles networks of thousands of nodes in seconds, with a real-time log of what the engine is doing.

Import existing networks

Load a network from GeoJSON or CSV: nodes, pipes, reducers and valves are recognised, with checks that flag errors and warnings before the import.

Projects, versions and comparisons

Save projects to your account, snapshot variants as versions, keep the results of every calculation and compare two runs – on the map as well.

How it works

Three steps, from a blank sheet to a ready document.

1 · Draw

Place the supply point with its pressure, the delivery nodes with their demands (Sm³/h, kW, kg/h...), connect the pipes along the real street layout.

2 · Calculate and verify

One click: pressures, flows and velocities appear on the map. Non-compliant pipes turn red, with the detail of the violation.

3 · Size and export

Let Gasnetics pick the diameters from the catalogue, then generate the complete PDF calculation report, headed with your professional details.

Transparent, verifiable calculation

No black box: the site publishes canonical cases worked by hand and checked against the engine (gasnetics.com/validazione.html, in Italian), and every report includes an appendix that recomputes your network's critical path in full, number by number. The methodology cites its sources: Renouard, Italian practice (DM 16-17/04/2008, UNI 9165), configurable standard profiles.

Pricing

A model built for project work: no subscription.

Today: free beta

During the beta every feature is free: drawing, calculation, checks, sizing and the PDF report. Participants will receive complimentary credits at launch.

At launch: credits per project

You pay only for the project you export, in proportion to its size. Re-exporting the same project is free.

No recurring fees

No subscription to remember or cancel: credits never expire — use them when the right job comes in.

Start here

Site and documentation: gasnetics.com

The application (free beta): app.gasnetics.com

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