



QUICK PIPE STRESS
ANALYSIS & OPTIMAL SIZING

ADVANTAGES

- ✓ Fast start for new employees
- ✓ Integration with popular CAD & CAE tools
- ✓ “On the fly” calculations
- ✓ Flexible licensing
- ✓ Affordable price
- ✓ More than 2,000 active users worldwide

FEATURES

- ✓ Stress, flexibility, stability, and fatigue analysis for piping of any complexity
- ✓ Above-ground, buried, vacuum, high pressure and temperature, cryogenic piping
- ✓ HDPE, FRP/GRP/GRE piping
- ✓ Express analysis and sizing according to relevant standards
- ✓ Automatic selection of constant and variable spring supports

REDEFINING PIPE STRESS ANALYSIS

Pipe stress analysis has never been as easy as with PASS/START-PROF software. There are no obscure options, settings and questions. Just draw the piping system and run the analysis. Smart algorithms will do the rest of the job for you!

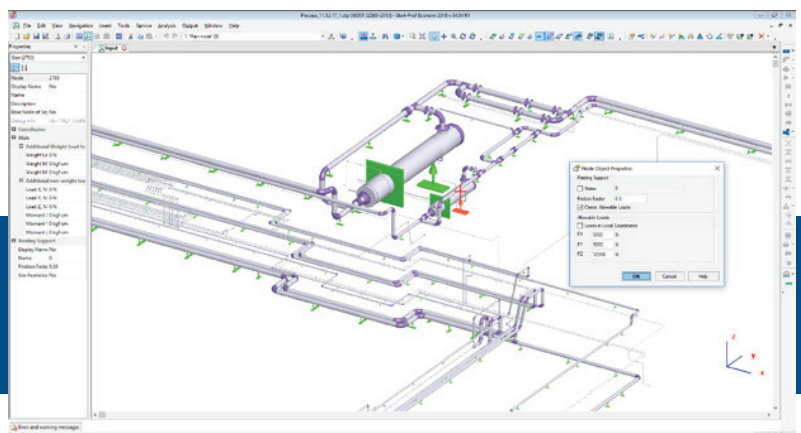
Using PASS/START-PROF, new employees will learn and perform stress analysis in days rather than months.

PASS/START-PROF combines a highly efficient solver, powerful analysis features, a user-friendly GUI, an intuitive 3D graphical pre/post-processor, and a detailed help system with embedded intelligence from generations of piping design experts.

POWERFUL CAPABILITIES

PASS/START-PROF provides comprehensive stress, flexibility, stability, and fatigue strength analysis with related sizing calculations for buried and above ground, HDPE, FRP/GRP/GRE, vacuum, high pressure, high temperature, and cryogenic piping systems. Calculations are performed under thermal, weight, pressure, wind, snow, ice, seismic, support settlement loads according to the most commonly used standards.

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POWERFUL CAPABILITIES

Nonlinear effects, such as support lift-off, gap, friction, rotation rods are included. PASS/START-PROF supports many other “must have” features: variable and constant spring selection, nozzle flexibilities, rotation equipment load analysis, SIF and k-factors for nonstandard fittings, embedded ASME B31J-2017 processor, analysis reports to Word, Excel etc.

INCREASED PRODUCTIVITY

PASS/START-PROF offers many functions that make piping model creation very quick including: group editing, quick loop addition, node point renumbering, and spring data application. Smart interactive reports including expansion joint report, spring support report, flanges leakage report, etc. help to evaluate analysis results quicker and easier.

WIDE INTEGRATION OPTIONS

PASS/START-PROF can import piping models ready for analysis from AVEVA PDMS and E3D, CAESAR II, and PCF formats. Data can also be exchanged within the PASS suite and with a large spectrum of general and special purpose CAD and CAE software tools.

EMBEDDED INTELLIGENCE

Smart Operation Mode Editor allows users to just draw the piping, add general snow, wind, ice, as well as seismic load information and run the analysis. All appropriate load values and load cases will be created automatically according to selected codes. Time consuming manual creation of load cases is no longer needed.

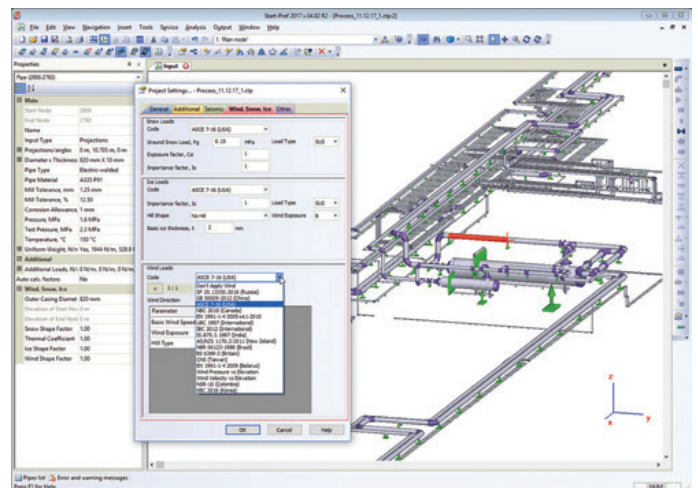
Smart Warning Message Window warns about e.g., pipe lifting off, overloading of supports and springs, or excess of deformations of expansion joints. Important problems detected in the model will not be missed.

Quick and easy buried pipeline analysis lets the user simply specify soil type, and define the pipe depth to run the analysis. The user does not have to specify restrained and unrestrained zones, calculate the virtual anchor length, nor run a soil modeler.

PASS/START-PROF will automatically do what is required for the correct soil simulation.

BROAD APPLICABILITY

Pipelines that can be analyzed include piping for: process and power, gas and oil transportation, district heating piping, hot water supply, and more.



Stress, flexibility, stability, and fatigue strength analysis are performed for buried, above ground, vacuum, high pressure, high temperature, and cryogenic piping.

Pipelines with various types of restraints, fittings and expansion joints can be easily evaluated. PASS/START-PROF also offers automatic selection of constant and variable spring supports.

EXPRESS ANALYZING & SIZING

Along with the analysis of piping systems of any complexity, PASS/START-PROF performs a wide spectrum of calculations “on the fly” thereby helping piping designers to make the right decisions.

PASS/START-PROF calculates pipe and fitting wall thicknesses, span lengths, as well as sizes of typical piping assemblies. It also checks flange leakage, pump and equipment loads, buried and above ground pipeline longitudinal stability, pipe wall stability under vacuum and other loads.

FLEXIBLE CONFIGURATIONS

PASS/START-PROF Complete provides simulation and sizing for any piping network considering the most commonly used codes.

PASS/START-PROF Power provides simulation and sizing for any piping networks based on applicable codes for power generation piping as well as for central heating networks.

PASS/START-PROF Process provides simulation and sizing for piping networks based on applicable codes for process plants as well as for gas and oil transportation systems.

PASS/Start-Prof HDPE&FRP provides piping stress analysis of high density polyethylene and/or fiberglass reinforced plastic piping systems.