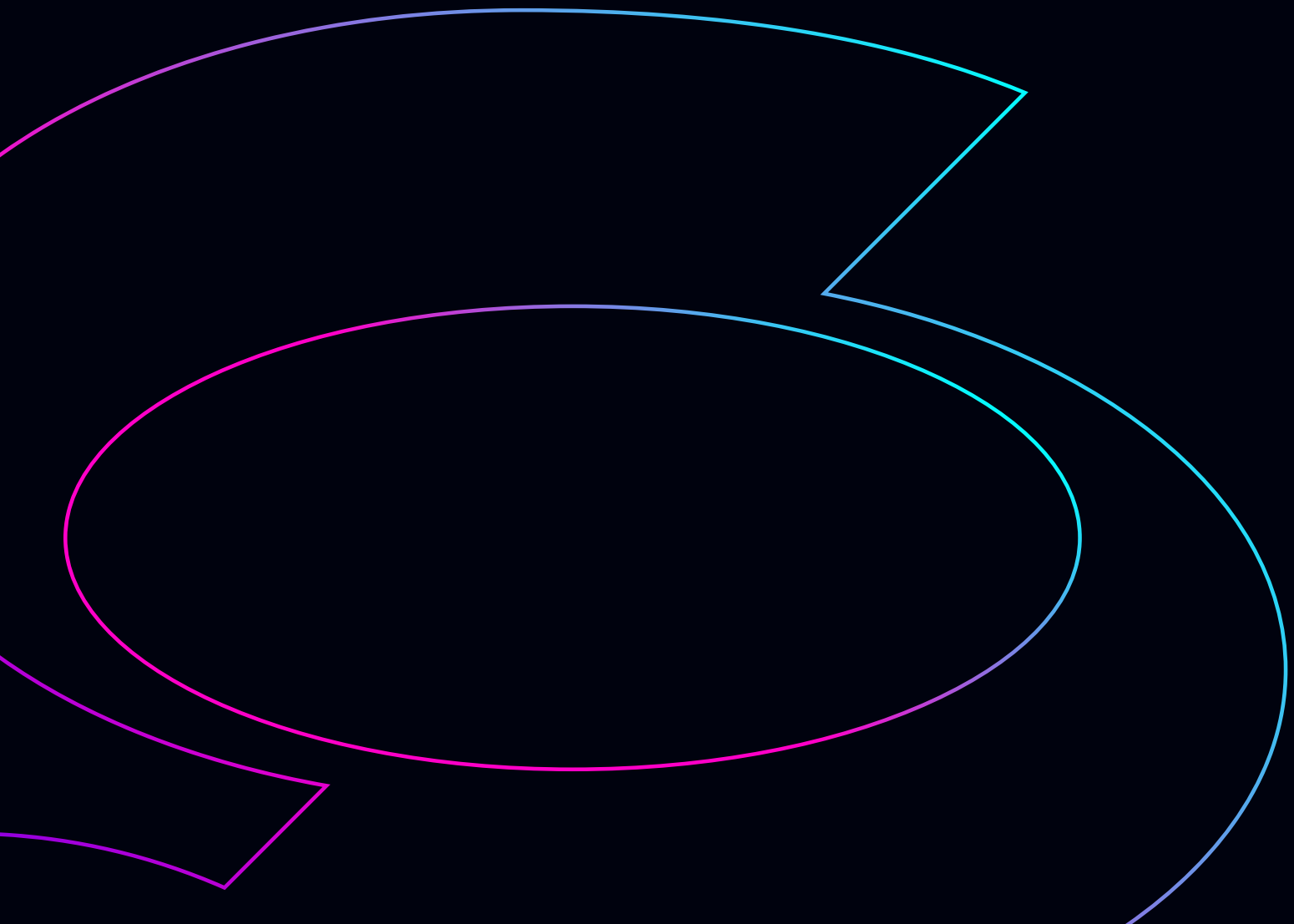
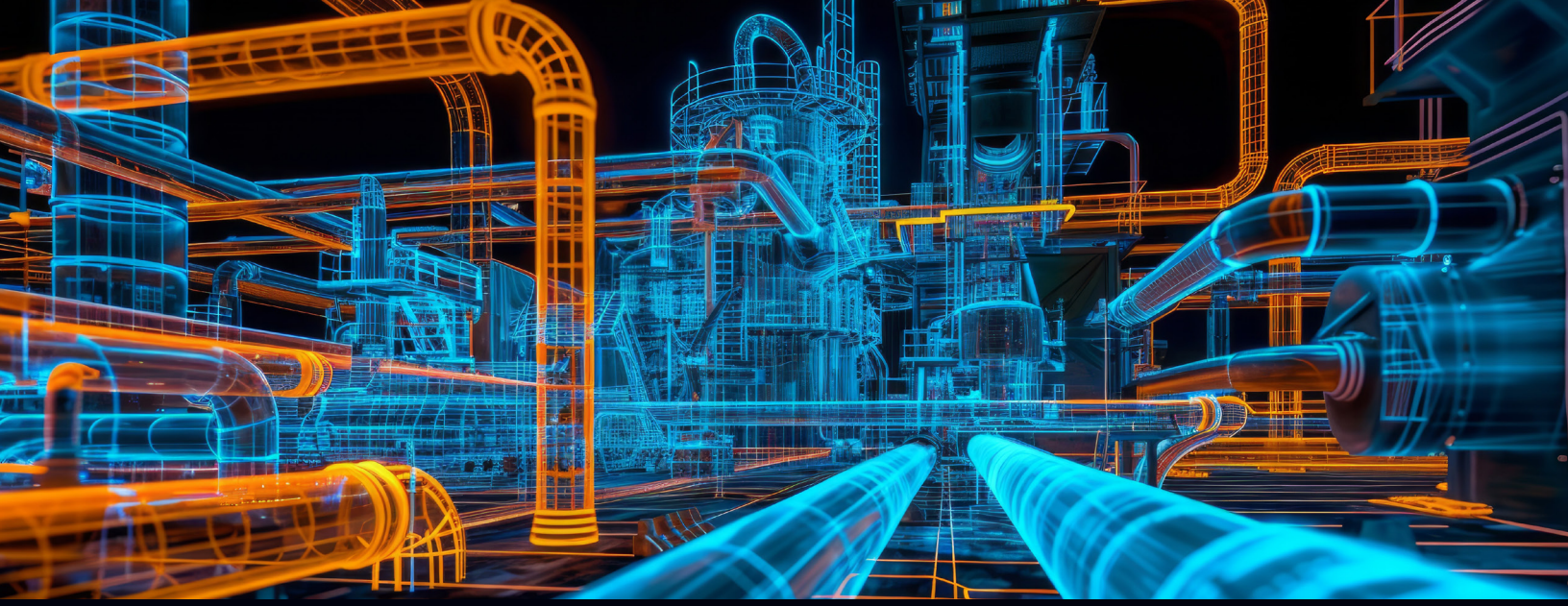
OCTAVE

BROCHURE

Design and engineering analysis interoperability

Transforming workflows with collaborative engineering





The industry choice

Plant design and engineering analysis solutions

Octave's design and engineering offerings work together to give you the power to tackle the most challenging and complex projects with greater ease and superior results.

The interoperable solutions provide an ecosystem that ensures data integrity, efficiency and success from the design phase to analysis and back to design. The solutions, chosen by leading plant engineering companies and owner operators worldwide, are trusted to deliver accurate, reliable results.

"By interfacing the design with analyses at key stages, we were able to identify and address potential errors and clashes."

Hailang Liu
Zhejiang Titan Design & Engineering Co., Ltd.



Overcome organizational bottlenecks with:

- Seamless data compatibility and effortless transfers, ensuring data integrity
- Unified models that retain the complexity of designs without simplification
- Efficient validation of changes without the need for manual re-creation
- Integrated multi-disciplinary inputs and enhanced collaboration, eliminating data siloes
- Comprehensive validation and verification of critical codes and standards
- Simplified error-checking and automated design refinement
- Streamlined, effective feedback loop from design to analysis and back to design

Enjoy faster and greater returns on investment with the ability to start designing right away.

Projects are quick to set up and cost less to:

- Design
- Build
- Operate
- Protect

Octave also keeps pace with changes in international standards and codes, so you are always assured of up-to-date, internationally viable output. We closely monitor industry trends and new technologies to keep you on the leading edge of plant design and engineering.

Clint VanDewark,
Erdman Anthony

"Forte 3DWorx and Aspect Pipe Stress allowed us to minimize rework and to pre-order materials ahead of time, reducing the cost of materials due to potential price increases."

Accelerating project success with unified design and analysis tools

Direct interoperability

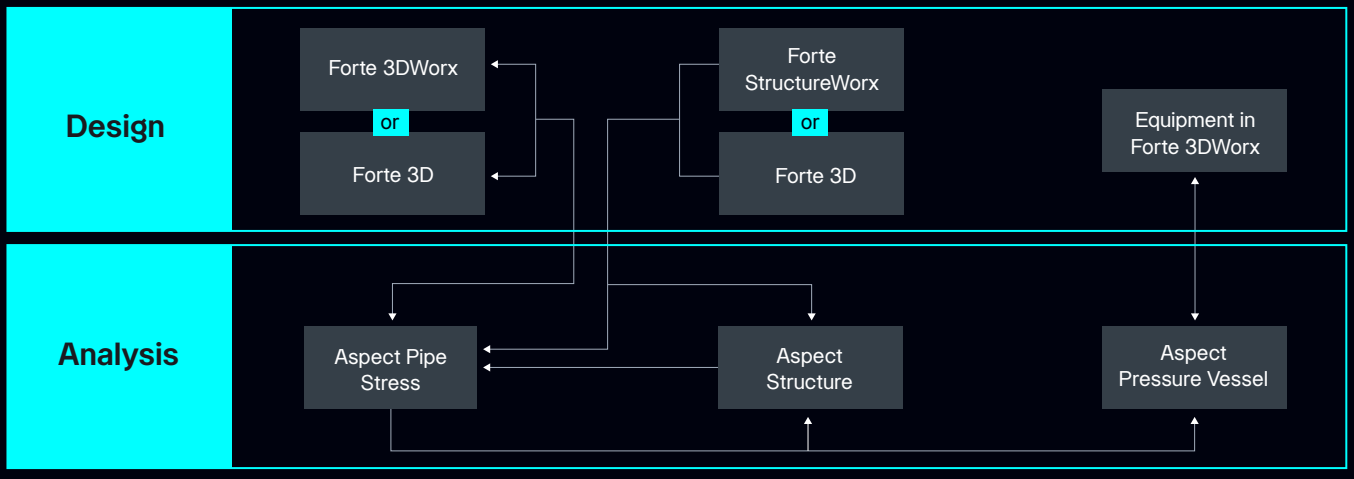
The direct interoperability between Forte 3DWorx (formerly CADWorx Plant Professional) and Forte 3D (formerly Intergraph Smart 3D) for design, and Aspect Pipe Stress (formerly CAESAR II) and Aspect Pressure Vessel (formerly PV Elite) for analysis, facilitates bi-directional data transfer, minimizing rework during project phases.

Forte 3DWorx's bi-directional link with Aspect Pressure Vessel allows synchronized design updates across both platforms, reducing data entry errors and saving time. Engineers can also transfer Forte StructureWorx (formerly CADWorx Structure) data into Aspect Structure (formerly GT STRUDL), eliminating the need for remodeling with each project change.

For some designers, participating in the analysis phase might be uncommon, but the interoperability and rapid data transfer encourages greater involvement, potentially leading to significant design improvements.

For instance, pipelines and their analysis data can be exported between design solutions and Aspect Pipe Stress, and vice versa. This direct interoperability not only accelerates modeling time for each pipeline but also enables both analysts and designers to explore possible design modifications or enhancements within the context of the original model.

Forte 3D and Forte 3DWorx also work with Aspect Structure for modeling and analysis, in addition to OnSite Construction Planning for modular and staged construction sequence analysis. Passing Forte StructureWorx data into Aspect Structure removes the need for remodeling with each of the hundreds of changes that happen in every project. This leads to improved accuracy, faster project completion times and cost savings for the organization.



Design Solutions

Versatile and scalable solutions for best-in-class plant design based on your project needs

Forte 3DWorx

Scalable solutions for the next generation of plant design

A complete solution for the next generation of plant design, Forte 3DWorx includes the most complete DWG file-based range of tools and provides intelligent drawing and database connectivity, advanced levels of automation, and easy-to-use drafting tools. The comprehensive suite of plant design tools includes piping, structural steel, equipment, process and instrument diagrams and design review, plus automatic isometrics and bills of material.

Forte 3DWorx is quick and easy to set up and use, so you can start designing right away. The bi-directional links between Forte 3DWorx and Aspect Pipe Stress for pipe stress analysis and Aspect Pressure Vessel for pressure vessel analysis, enable designers and engineers to easily share information while keeping the drawings, models and related information synchronized as changes are made. Plus, the fast processing and highly refined user interface features in Forte 3DWorx make it possible for multiple users to work together efficiently, even on the largest models.

Forte 3DWorx runs on AutoCAD® or BricsCAD® platforms, providing a complete package of powerful and adaptive tools that enable quick and easy creation of fully intelligent plant models. The design suite has revolutionized the plant design industry with its ease of use, flexibility, interconnectivity and scalability.

Forte 3D

Enterprise level solutions for the most complex designs

Industrial plant design on a greater scale with Forte 3D enables the design of industrial facilities for any and all needs, from mega projects to sustaining engineering efforts. With its data-first approach, Forte 3D provides all capabilities needed to design a facility, as well as maintain the digital representation for a comprehensive digital twin throughout an asset's lifecycle.

As a fundamental component of any digital strategy, Forte 3D provides project modeling capabilities needed to design facilities and then maintain their 3D "as-built" representations. Other advantages are fully customizable automation capabilities, and model reuse approach to execute even the largest and most complex projects.

Forte 3D is part of Octave's greater ecosystem that incorporates their Digital Backbone, which enables real-time connectivity amongst all of Octave's Digital Project solutions as well as into the operations and maintenance of an asset. With internet access or a smart phone, project teams have access to tailored data specific to their needs with the ability to collaborate with their peers instantly. This unlocks a continuous feed of project data, regardless if stakeholders are users of Forte 3D or not.

Engineering analysis solutions

Interoperable, industry-leading solutions for piping, pressure vessels and structures

Aspect Pipe Stress

The engineer's standard in pipe stress analysis

Aspect Pipe Stress is the industry-standard software for pipe stress analysis, enabling engineers to design and evaluate piping systems of any size, type and complexity. Whether you are working on in-ground, above-ground, offshore or subsea piping, Aspect Pipe Stress can help you comply with more than 40 international codes and standards, as well as your own custom specifications.

As an Aspect Pipe Stress user, you and your organization benefit from Octave's Smart Community, where you can access webinars, training and support resources.

You can also share your ideas, feedback and best practices with other Aspect Pipe Stress users and experts.

Aspect Pipe Stress is the trusted choice of thousands of engineers and piping professionals worldwide.

Whether you are designing a new system, modifying an existing one or performing a fitness-for-service assessment, Aspect Pipe Stress can help you deliver your projects on time, on budget and with confidence.

Aspect Pressure Vessel

Industry-leading pressure vessel analysis software

Aspect Pressure Vessel stands at the forefront of pressure vessel design and analysis solutions, containing every major code and standard needed to engineer innovative designs for both pressure vessels and heat exchangers.

Automated 2D and 3D visualization enables easier design and analysis, in addition to improved communication between engineers and fabricators, saving valuable time and resources. With the ability to perform fitness-for-service assessments on older equipment, you can extend the life of your assets and ensure their safety and reliability for years to come. This data can be easily verified using a variety of equations and reporting methods.

Design, analyze and innovate with confidence using Aspect Pressure Vessel while streamlining your workflow to save time and resources.

Aspect Structure

Comprehensive structural analysis and design

Aspect Structure is a must for any organization seeking to ensure their structures are safe and up-to-code, in addition to giving engineers the ability to analyze loads and stresses on these structures.

With Aspect Structure, engineers can take into account weight, pressure, thermal, seismic or any other static or dynamic conditions. Aspect Structure also features beam and finite element analysis (FEA), providing a complete range of design codes, including AISC, ACI and NF codes, alongside regional codes from Europe, India and China.

With Aspect Structure, you can validate the viability and integrity of your structural projects anywhere in the world. Trust Aspect Structure for your structural analysis and design needs and achieve safety, performance and cost-effectiveness. Design and Engineering Analysis Interoperability



Aspect Tank

Comprehensive tank design and analysis for product storage

Aspect Tank is a tank design and analysis program used by engineers all over the globe to ensure the proper storage of various types of fluids.

This solution ensures assets meet American Petroleum Institute (API) standards in addition to withstanding wind, seismic and settlement conditions.

This also includes air venting requirements. Context-sensitive help within Aspect Tank guides engineers to perform their best, providing code references and technical advice throughout design and analysis steps.

Aspect Tank provides engineers with many databases, including several U.S. and international structural steel databases, enabling the solution to fit the needs of the chemical, petrochemical, power and water treatment industries.

Aspect Nuclear Pipe Stress

Efficient and streamlined nuclear pipe stress calculation software

Aspect Nuclear Pipe Stress is the ultimate powerhouse that can revolutionize your nuclear workflow. It's optimized for Class 1 nuclear piping, a feature not available in Aspect Pipe Stress.

As an efficient, streamlined software for nuclear pipe stress calculations, Aspect Nuclear Pipe Stress is certified for use in the nuclear industry (RCC and ASME class 1, 2 and 3) and continuously maintained in compliance with ASME NQA-1.

When faced with demanding nuclear seismic requirements, let Aspect Nuclear Pipe Stress handle rigorous, dynamic analyses. Boasting a diverse range of analysis types - from linear and non-linear calculations, heat transfer and thermal gradients to fatigue analysis, strain energy-weighted composite modal damping and time history analysis.

Aspect Nuclear Pipe Stress makes sure you're equipped to tackle any nuclear project challenge. Dive into the future of nuclear pipe stress calculations with Aspect Nuclear Pipe Stress.



Industry Applications

Mining

Pipeline/offshore

Buried pipe
Intra-plant pipe
Transmission lines

Power

Co-generation
Coal
Gas
Hydroelectric
Nuclear

Nuclear plants

Pipe Stress Analysis
Structural
NQA-1 Compliance

Process facilities

Chemical
Food & beverage
Petrochemical
Pharmaceuticals
Natural Gas
Oil & gas
Refineries
Semiconductors

Structural/buildings

Architectural
Building services
Equipment
HVAC
Steelwork

Shipbuilding

Storage tanks

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property and assets – for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.

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