

# Piping Design



Local Expertise. Reliable Results











# Creating Piping Layouts for Complex Engineering Requirements

Endproc specializes in providing advanced BIM-based Piping Design solutions, developing highly precise 3D models that capture every detail and contains complete fabrication and assembly information for seamless project execution.

Our team possesses in-depth expertise in industry codes and standards, including ASME, AWWA, and NFPA, guaranteeing compliance and quality in every project.

We develop multiple piping layout options, enabling operations, engineering, and maintenance teams to explore and evaluate designs in a virtual environment. This process helps identify and resolve potential issues early while ensuring the selection of the most efficient piping layouts for streamlined construction.



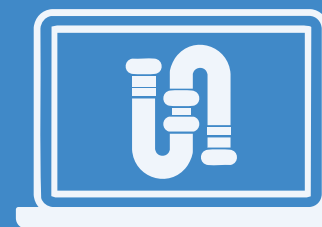


## From Point-Cloud to Detailed Fabrication Drawings

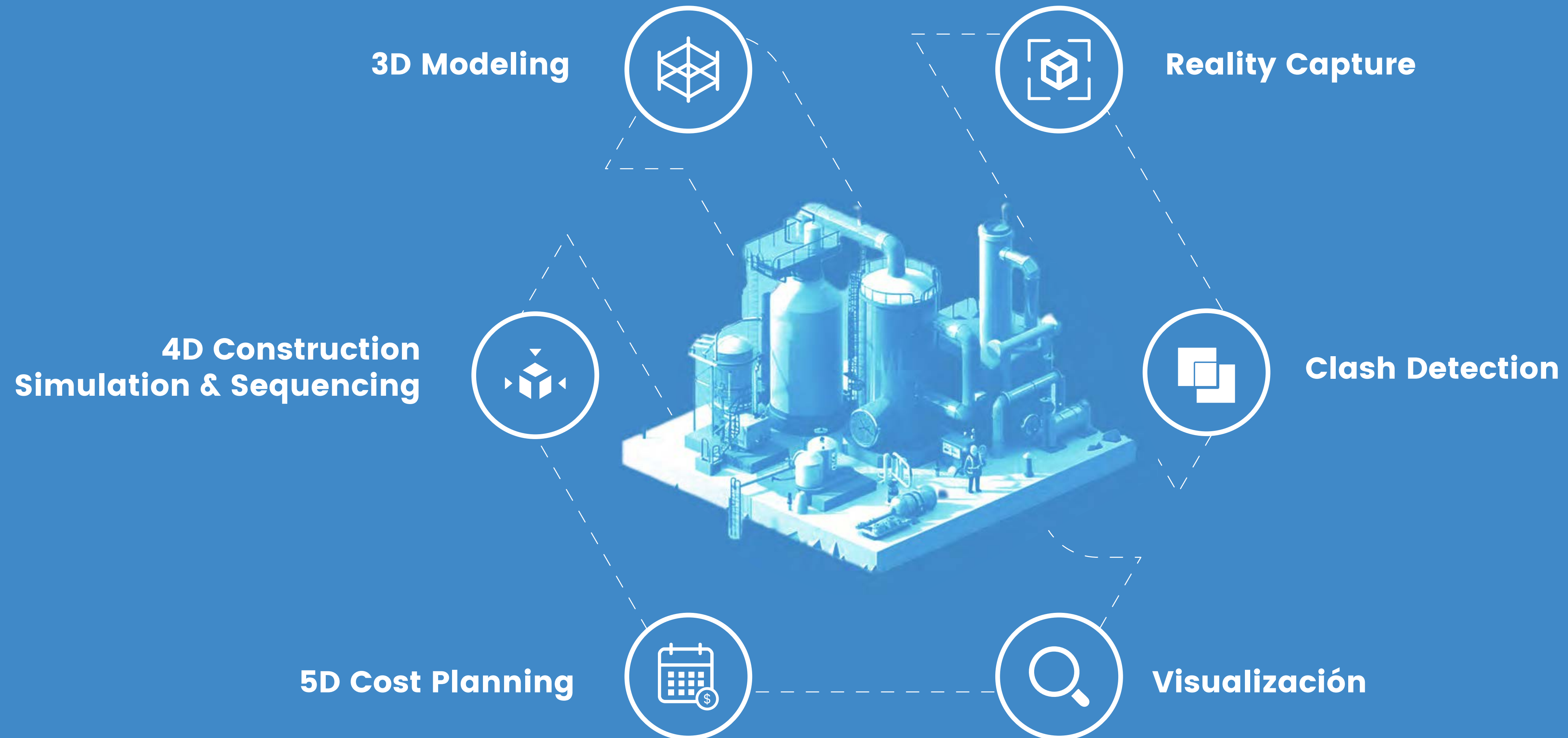
Working with Virtual Design and Construction (VDC) methodology, utilizing BIM, and Reality capture technologies, we create constructible piping models.

We specialize in processing 3D scans (Point Clouds) and survey data, enabling us to integrate field data into the project workflow to significantly minimize errors. This approach ensures a seamless connection between design and real-world conditions.

Highly detailed and accurate 3D models allow to identify and resolve potential issues before they escalate. Additionally, 3D visualization facilitates understanding the relationships between different project components, reducing the risk of design or construction errors.









01

Comprehensive  
Deliverables to streamline  
your Construction Projects



## 3D BIM Piping Model

We prepare conceptual and detailed models based on P&IDs.

From initial design to installation, 3D models offer benefits at every project stage. Obtain materials take-offs and isometric drawings effortlessly, enabling more precise bids and streamlined procurement planning.

## Piping General Arrangement Drawings

General Arrangement drawings for piping facilitate prompt erection of piping systems. Various orthogonal views, sections, and detailed representations are provided. As per standard procedure, a Clash detection test is conducted before drawing generation.

## Piping Isometric and Spools Drawings

Piping isometrics and spools for accurate installation and fabrication, drawings are set as per client preferences and display complete information including process and quality control data for each line.

## Piping Installation Details

When necessary, we provide drawings that show typical details for different types of piping supports, and details for the installation of equipment and in-line instruments.

## Custom Reports

Complete bill of materials, status and progress reports for the whole model or specific areas.



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## Modular process skids for faster project completion





## We have experience designing Modular Process Skids.

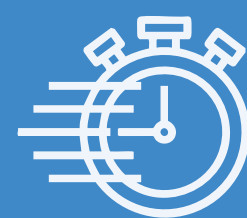
We specialize in designing Modular Process Skids—self-contained process systems built into a frame or "module" for seamless transportation and integration. These skids can include entire process systems, offering flexibility across various industrial needs.

Modular construction is increasingly favored over traditional fabrication methods for process systems. One key advantage is the cost efficiency of fabricating modular skids off-site in a controlled environment.

Beyond cost savings, skid-mounted process systems come with numerous other benefits.



# Advantages of Skid Mounted Process Systems



## Shorter Project Timelines

Off-site fabrication of process skids allows on-site facility upgrades to continue without delays. By performing these tasks in parallel, entire project schedules can be shortened significantly, enabling manufacturers to bring products to market faster.



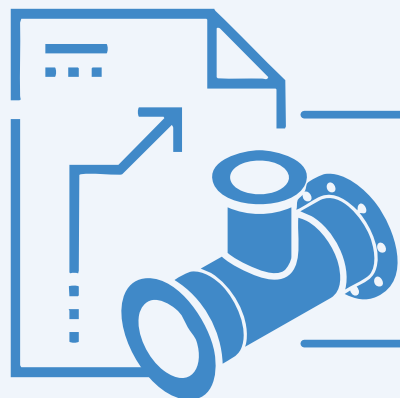
## Higher Quality Fabrication

Skids constructed in a controlled shop environment eliminate risks caused by adverse weather conditions. Additionally, skilled labor can perform precision pre-fabrication and welds in the shop rather than making overhead welding in the field, resulting in higher-quality welds.



## Cost-Effective Scalability

Deploying multiple skids across various sites can reduce engineering and design costs. The designs from the first skid can be replicated at a lower cost, creating savings on every subsequent module.



**We provide full set of fabrication Documents for Piping and structural**





03

## Comprehensive Piping Design Solutions for diverse sectors





## Designing and detailing Piping layouts across different industries

The design, construction, operation, and maintenance of piping systems require a solid understanding of key principles. This includes knowledge of piping materials, design fundamentals, fabrication techniques, installation processes, and rigorous testing and inspection protocols. Compliance with local regulations and industry codes is vital to ensure safety and reliability.

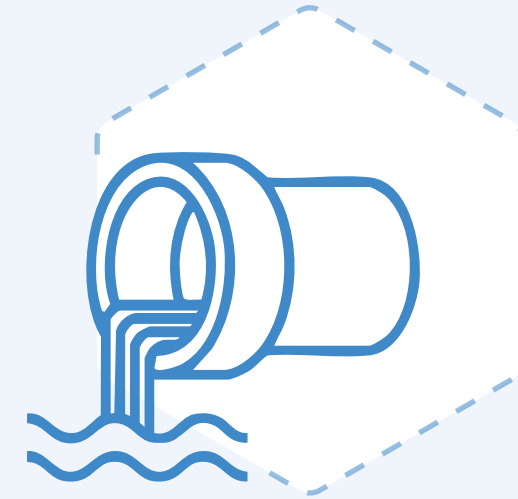
Our team has expertise working with standards as **ASME**, **AWWA**, and **NFPA**.







## Water and wastewater treatment.



Piping systems play a critical role in modern water and wastewater treatment facilities.

We work to provide a variety of reliable solutions for projects of all sizes for the wastewater industry. We support all stakeholders throughout the wastewater project lifecycle to meet the technical and value needs of each project.

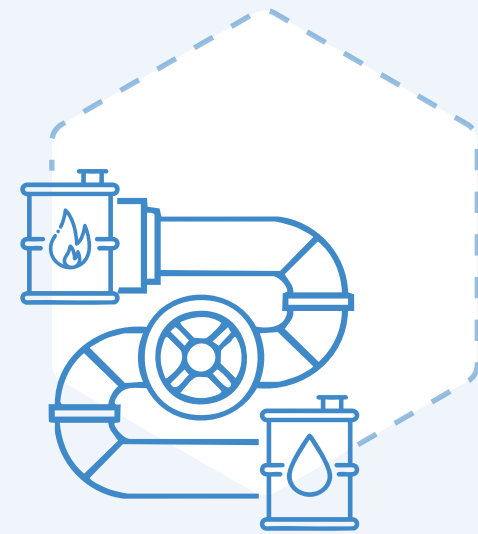
From conceptual design to Fully constructible models and we support the entire wastewater project cycle. Beginning with the collection and conveyance of raw stormwater and wastewater to treatment, release, reuse and waste-to-energy processes.







## Oil & Gas

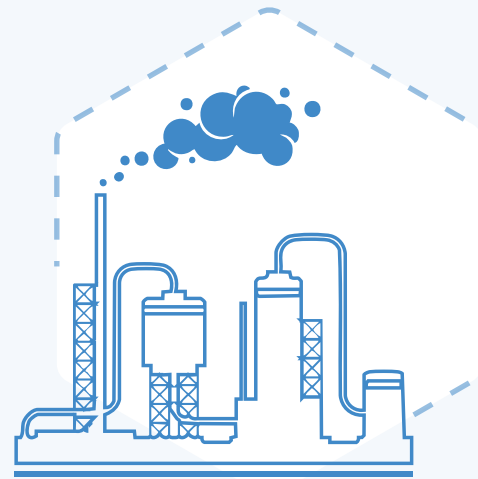


In the oil and gas sector, piping systems are essential for the safe and efficient transport of hydrocarbons from the wellhead to the refinery or processing facility. The complex network of piping inside a plant serves as the foundation of the process.

Planning, design, and construction requires meticulous attention to detail. This is where our team can bring value to your projects.







## Mining

The mining and mineral processing industry presents a unique array of challenges when it comes to designing and operating piping systems. From slurry pipelines to mine dewatering systems, Piping designers are tasked with navigating complex demands.

While reliability and availability remain critical factors, there is growing pressure to also address capital costs, efficiency, and optimization.

A well-designed piping system balances all these considerations. Our skilled designers ensure these factors are thoroughly evaluated and incorporated during the development process.







# Endproc

Building smarter solutions

[www.endproc.com](http://www.endproc.com)