

# Multi-Stage Gas Compressor

(Piping Detailed Engineering & 3D Modeling)

## Key Features

### Technology:

PDS  
CAESAR II  
AutoCAD  
Navisworks

### Duration:

The project was completed in 6 months

### Deliverables:

1. Area-wise model
2. Area-wise clash check report
3. Area-wise piping GA
4. IFC Isometrics
5. Stress analysis reports
6. Nozzle orientation reports
7. Battery limits/ tie in points / sleeper details
8. Support books with sketches
9. BOM – Bill Of Materials
10. Delivering all check prints with check list for audit purpose

## The Client

The client is a global supplier of custom-engineered based rotating equipment solutions for applications in the oil, gas, process, power, and other industries. It is headquartered in Houston, Texas, United States with 13 manufacturing sites and over 76 sales offices worldwide.

## The Business Need

The client required piping detailed engineering & 3D modeling for a multi-stage gas compressor. The project underwent many designs & modeling cycles and was compliant to the international industry codes and standards.

## Rishabh's Solution

Rishabh's engineering team completed the piping detailed engineering and 3D modelling for multi-stage gas compressor in 6 months.

The multi-stage gas compressor was designed to include

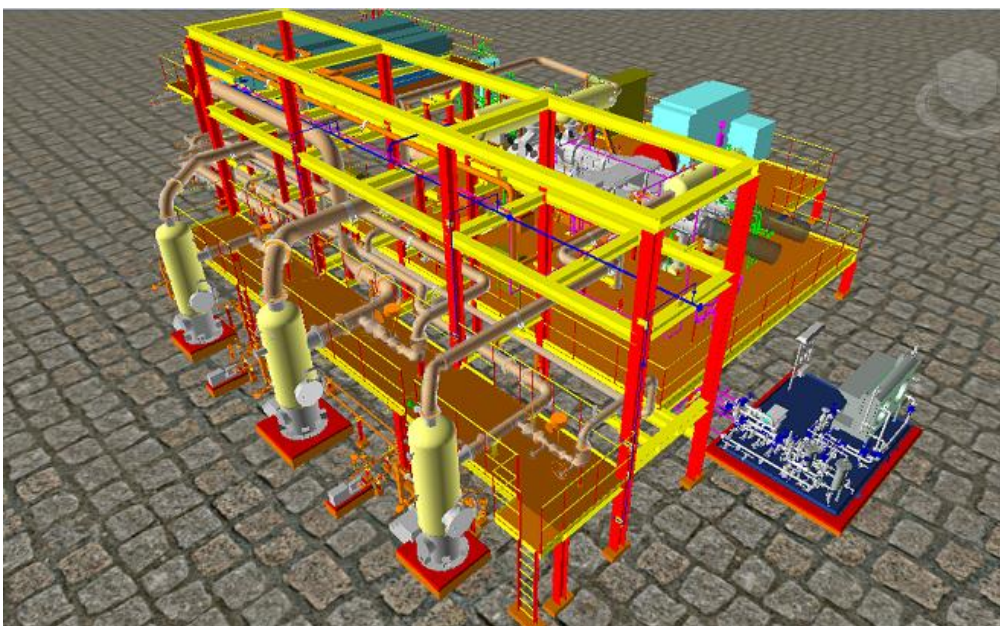
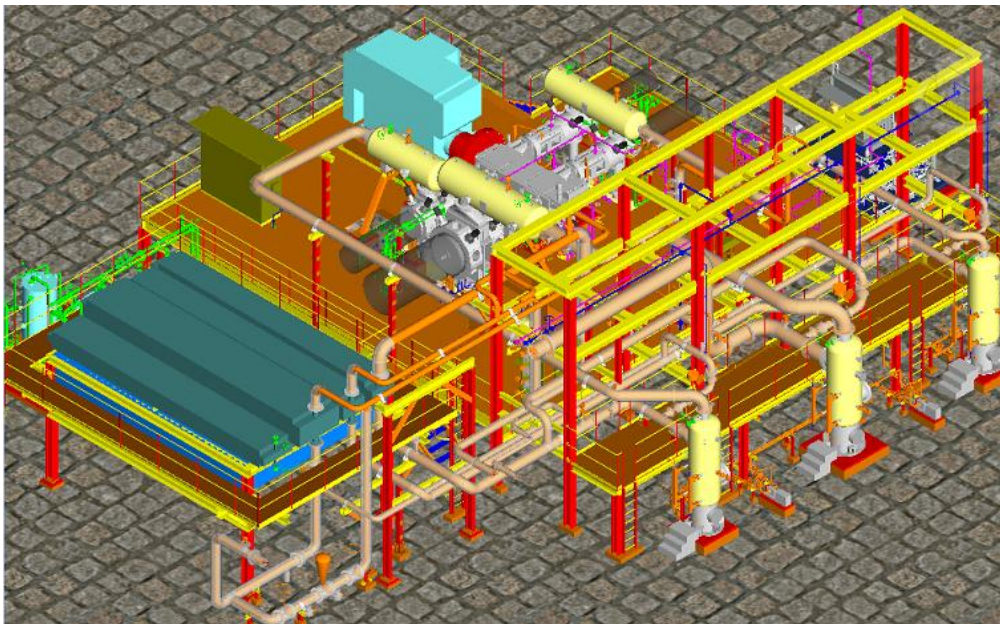
- Gas process
- Nitrogen
- Lube oil
- Package drain
- Cooling water console
- Instrument air
- Cooling water
- Package drain Pot vent

The details for piping engineering included

- Process piping
- Utility piping
- Vessel trim
- Physical supports

In addition, the equipment included for detailed engineering & 3D modeling were

- Suction Scrubber
- Suction Volume Bottle
- Discharge Volume Bottle
- Discharge Cooler
- Condensate Pump
- Drum Pot
- Cooling Water Tank
- Air Cooled Exchanger
- Cooling Water Pump



## Technology Used

- 3D Modeling – PDS
- Piping Stress Analysis – CAESAR II
- 2D Drawings – AutoCAD
- Review File to be delivered in .NWD (Navisworks)

## Key Deliverables

- Area wise model
- Area wise clash check report
- Area wise Piping GA
- IFC Isometrics
- Stress Analysis Reports
- Nozzle orientation reports
- Battery limits/ Tie in points / Sleeper details
- Support Books with Sketches
- BOM – Bill Of Materials
- All check prints with check list for audit purpose

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More information about Rishabh Engineering, please visit:  
[www.rishabheng.com](http://www.rishabheng.com) | [www.rishabhsoft.com](http://www.rishabhsoft.com) | [www.rishabhbpo.com](http://www.rishabhbpo.com)

### About Rishabh Engineering

Rishabh Engineering provides multidisciplinary engineering support services to EPC companies in industries like Oil and Gas, Petrochemical, Power and Water treatment. Our parent company, Rishabh Software is a CMMI level-3, ISO9001 and ISO27001 company that provides services in Software Development, Business Process Outsourcing (BPO) and Engineering Services Outsourcing (ESO) to clients globally. Rishabh has offices in USA, UK and India with their main delivery center in Vadodara, India.