

## CAD Conversion of Reducer Gear Assembly

### Case Study Highlights

#### Client Profile:

Customized Tools & Equipments Manufacturer,  
India

#### Objective:

To reverse engineer steel strapping machine for design optimization and document design information digitally

#### Challenges:

- Accurate conversion of 2D drawings into digital 3D CAD model as well as manufacturing and assembly drawings from the available PDF documents

#### Solution:

The available 2D drawing was analyzed by a team of CAD professionals and the CAD conversion process was executed. Detailed fabrication drawings were also prepared, considering the manufacturing requirements. The final assembly drawing was developed for shop floor requirements.

**Software Used:** Pro E wildfire 4.0

As manufacturing techniques continue to rely on computers, the use of computer aided drawings for fabrication purposes is essentially required. Use of CAD allows manufacturers to have a digital documentation of the product being manufactured with detailed information on assembly, manufacturing processes required as well as a 3D visualization of the product.

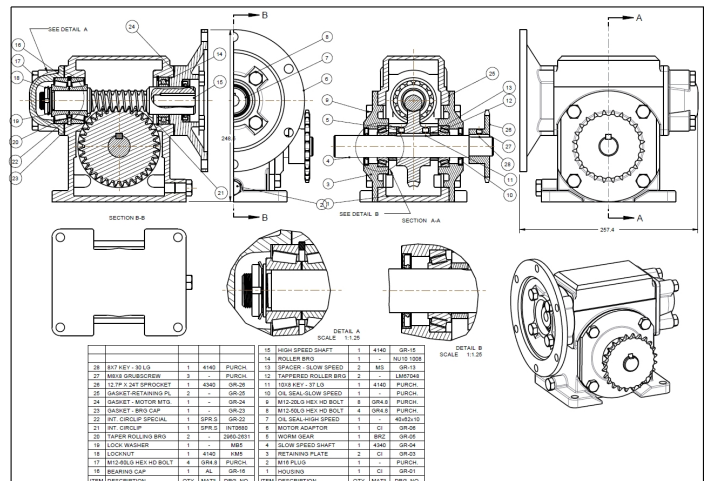
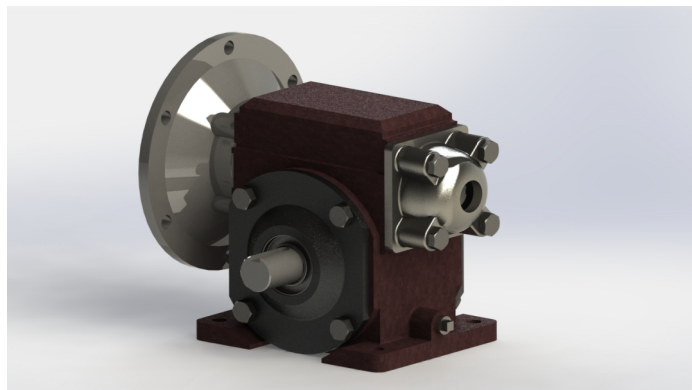
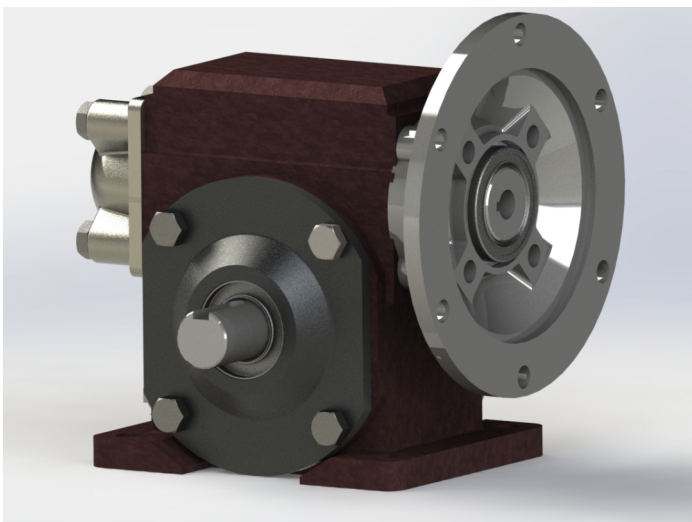
A leading tools & equipments manufacturer from India needed to convert their existing 2D drawings available in PDF format into CAD format. The client also needed to develop manufacturing drawings with appropriate dimensions and representation of manufacturing processes for shop floor requirements.

### Solution

The available 2D drawings in PDF format were converted into CAD format using industry leading CAD software. Based on the drawings developed using the CAD tools, detailed manufacturing drawings were developed describing the manufacturing process required, bill of materials and details about fits and tolerances. An assembly drawing was also developed, based on which a 3D model of the assembly was generated.

### Benefits

- Comprehensive manufacturing information made available to the client through detailed fabrication drawings
- Digital documentation provided easier modification in the design whenever required
- 3D model and assembly drawing assisted in reducing the manufacturing turn around time



## About Mechanical 3D Modelling

Mechanical 3D Modelling is an India based company that caters for global clientele and plans to penetrate deeper into the existing and emerging markets. Proficiency lies in offering qualitative, cost effective and time bound mechanical engineering design services, including 2D, 3D CAD drafting, 3D solid modeling, FEA, CFD, rapid prototyping, reverse engineering. Professional and highly experienced team can handle all kind of CAD projects with the use of AutoCAD, Wildfire, 3D Max, Inventor, Solid Works, Solid-edges and Pro-e tools.