

# CNC EXPERT STANDARDS

PROJECT: TITAN-2M  
CERTIFICATION: CAD

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## OVERVIEW:

Successfully demonstrated comprehension of the TITAN-2M CAD performance standard. Create an accurate and fully defined TITAN-2M solid model using CAD software and part documentation.

## MATERIALS:

- TITAN-2M part print
- Computer with CAD software

## SKILLS DEMONSTRATED:

### SKETCHING

- **Create Sketch:** Enters Sketch mode and creates a new sketch on a selected plane or face.
- **Select Construction Plane:** Selects plane on which to sketch part dimensions.
- **Two Point Rectangle:** Creates a rectangle using two points for the diagonal corners.
- **Center Diameter Circle:** Creates a circle using a center point and diameter.
- **Line:** Creates lines and arcs.
- **Point:** Creates a sketch point.
- **Dimensioning:** Assigns dimension values to sketch geometries and/or modifies existing dimensions.
- **Construction Lines:** Creates a construction line for referencing purposes.
- **Horizontal/Vertical Constraint:** Places a horizontal or vertical constraint on two or more sketch features.

## CREATING

- **Hole:** Creates a hole based on user-specified values and selections.
- **Thread:** Add internal or external threads to cylindrical geometry.
- **Mirror:** Makes a mirrored copy of selected faces, features, bodies, or components at equal distances across a plane.

## MODIFYING

- **Press Pull:** Modifies the selected geometry using offset, extrude, or fillet commands.
- **3D Fillet:** Places an arc of a specified radius at the intersection of two lines or arcs.
- **3D Chamfer:** Applies a bevel to one or more edges.

## CONSTRUCT

- **Midplane:** Creates a construction plane at the midpoint between two faces or work planes.