

Assessment 3

Description of activity:

You have received an official request to modify and replace the original Vee block & Clamp part and assembly drawings with new CAD versions in line with the organisational guidelines and procedure.

The original paper drawings have been lost - the only information available is an old isometric assembly drawing which uses imperial units. The drawing has limited information and will require the imperial dimensions converting to the closest whole number metric units.

Using Autocad your brief is to re-draw all the components and complete a general assembly drawing including a parts list to BS 888 /ISO 128 standards you must also comply with the organisational guidelines

Before you start any work you will need to plan assess the drawing activities by considering the required functionality of the product. You can apply your own modifications as required - creating the missing dimensions for the Vee Block, the Clamp Frame & the Screw you should also consider the following design features in your drawing:

- Ensure your design is fully functional and is fit for purpose
- Select the most appropriate materials to suit each component
- Use Reference charts & tables to establish thread data- tapping drills etc
- To ensure the life and the quality of the components apply dimensional tolerances, geometrical tolerances and suitable clearances between moving parts.
- To ensure the quality of the product consider surface finish and surface treatment

You will be required to draw each component in third angle projection to BS 888 /ISO 128 standards. You must include all the relevant information needed to manufacture each part efficiently.

You will be expected to include the following detail in your CAD drawing:

- The use of layers is required
- Appropriate selection of Line types
- All required symbols and conventions
- Geometrical & Dimensional tolerances
- All required box information

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You will be required to draw a general arrangement drawing which must contain the following:

- All components in their assembled position in third angle projection
- A auxiliary cross sectional view is required
- A parts list to be included

To complete the task and meet the organisational guidelines and procedures you must ensure all the following criteria have been met:

- Check all drawing for errors
- Ensure the drawings are correctly titled and referenced
- Ensure that all drawings have a valid drawing number
- Ensure that all the drawings have been checked and approved by your training officer
- Produce hard copies of all the drawings for assessment
- Save and back up all data to the appropriate locations