

Partnered by: **neusbürger**



Tool Design 'Design Challenge 2018'

Created by: NTTF

ORGANISED BY:  **NTTF**
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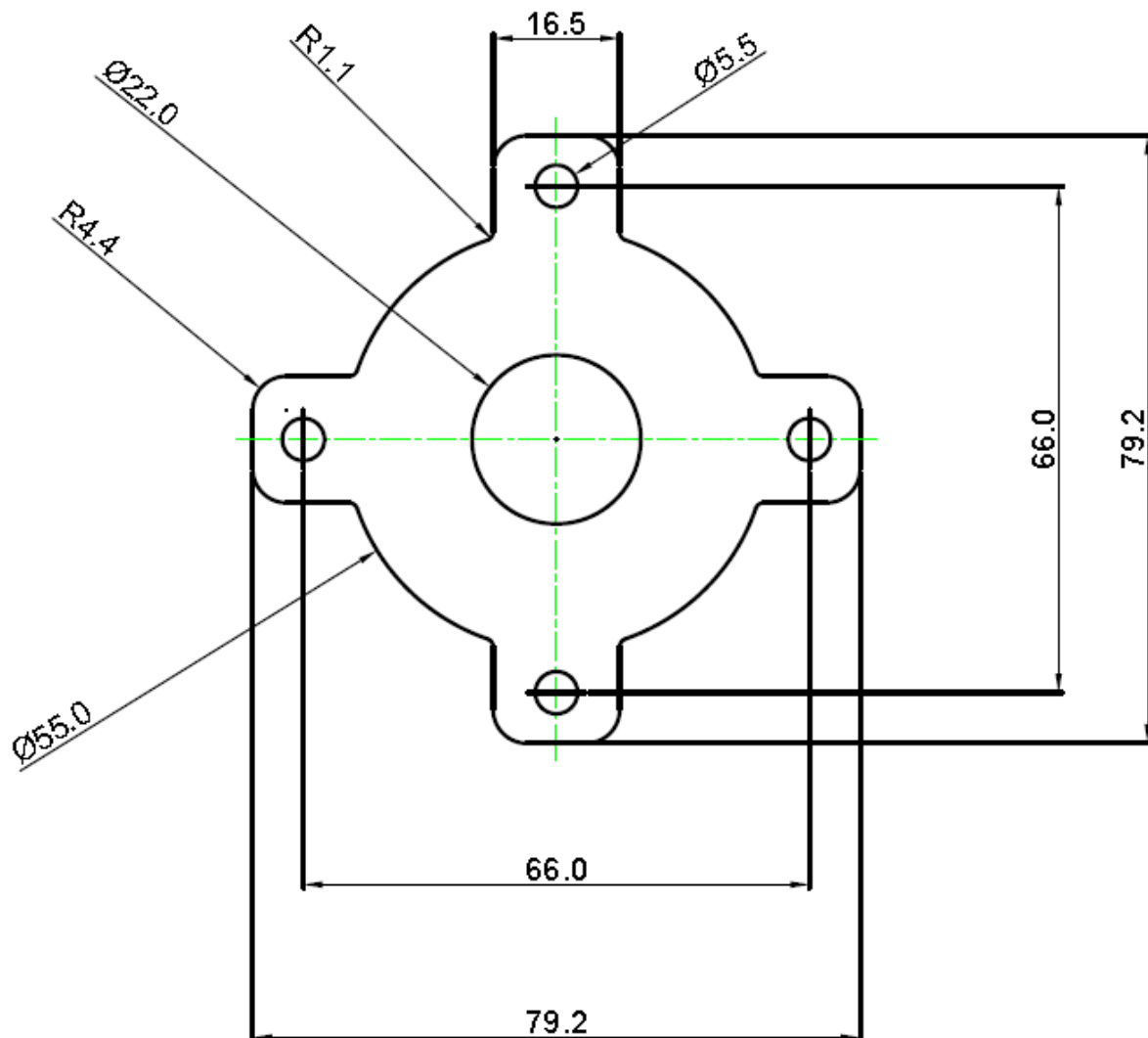
CONTENTS

This test project consists of the following documentation:

1. Component Drawing & Instructions

INTRODUCTION

Design a Compound Tool for the following component.



Material: - 1/4 Hard CRCA
Shear Stress: - 40 Kgs/mm²
T max: - 400N/mm²
Sheet Thickness: - 2mm

DESCRIPTION OF PROJECT & TASKS

Review the component drawing and its dimensions properly, then model the component, plan the strip layout, design the tool assembly. Also, create exploded views of the assembly. Your design should also contain design calculations, detail drawings of Blanking Die & Punch

You have **6 hours** to complete this project.

INSTRUCTIONS TO THE COMPETITOR

OPEN & REVIEW SUPPLIED PRINTS

1. Print of the Competitor Test project.
2. The supplied Component drawing dimensions are all in mm.

MODELLING & ASSEMBLY

1. Model the Component. Refer the print for dimensions.
2. Create an optimal strip layout using the modeled Component, design the tool according to the strip layout planned using standard parts from fusion library. Use your best engineering knowledge to calculate and design the tool.
- 3. Create the complete Tool Assembly using Standard elements from Meusburger Catalog**

CREATE DRAWINGS

To complete the drawings:

- i. On the first sheet, create a component drawing and the planned strip layout.
 - Show all the stages involved & do the blanking & stripping force calculations
- ii. On the second sheet, create an plan and front view of the entire Tool Assembly.
 - Add bill of materials. The list should have 6 columns, namely; Part no, Description, Qty, material, Size & Remarks.
- iii. On the third sheet, create an exploded, shaded isometric view of the Tool Assembly.
- iv. On the fourth sheet, create a detail drawing of the blanking punch, piercing punch and die block.
 - Add all the important dimensions with the tolerances and cutting clearances clearly indicated wherever applicable.
- v. Do all the calculations on the booklet provided to you during the time of the test.

REMARKS

1. For any missing dimensions, approximate the value.
2. Standard fasteners are to be used from Autodesk fusion library only (not to be drawn).
3. All drawings must be printed on A3 size sheets.
4. All files must be saved using the competition file naming convention

MARKING SCHEME

Characteristic	Description	MARKS
A	Modelling	8
B	Drawings	10
C	Dimensions	5
D	Presentations	2
	Total:	25

--ALL THE BEST--