



Halodi Mechanical Design Case:

- Based on the three-view 2D drawing, please make a 3D model of this part using SolidWorks.
- Make the design in such a way that changing a dimension or geometry won't break the model at a later stage.
- Once the model is designed, the geometry will be used for a quick simulation study. Constraints, load, etc. will be provided.

Notes:

- This is a stationary part.
- In terms of assembly order, this part goes last onto its assembly.
- The bearing can be fit first.

Questions:

- Manufacturing tolerance for Ø37mm bearing seat.
- Manufacturing tolerance for Ø15mm hole.
- Other than the dimensional tolerances on items (1) and (2), would you add any information to the manufacturing drawing with respect to those features?
- How would you manufacture and assemble this part? The expected volume is of 50 units a year.

Tips:

- The time for the test is constrained, so use your best judgement to focus on the features you assume most relevant based on the input provided.
- The Interviewer is available at all times. Questions are more than welcome :)
- Best of luck!

This is the Bearing housing. The bearing to be used is INA 3805, which is a double row angular contact bearing. The nominal OD of the bearing is 37mm.

(1) Please specify a proper fit tolerance for manufacturing. Ask the interviewer for any information relevant for justifying your choice.

This hole holds a stationary aluminum shaft with nominal OD of 15mm. The purpose of this hole is to securely hold the shaft in-place.

(2) Please specify a proper fit tolerance for manufacturing.

Material: 7075-T6 (SN)	Drawing Number - Name: HipFork - Mechanical Design Case	Configuration (Neutral)
Approx Weight (g): 192.14	Description: <i>This drawing and any information or descriptive material set out on it are the confidential and copyright property of Halodi Robotics® and MUST NOT BE DISCLOSED, COPIED, LOANED in whole or part or used for any purpose without the written permission of Halodi Robotics.</i>	
Finish:	Designed by: Armin	Design Date: 23/07/2018
Units: mm General Tolerances: Linear: ±0.06 Angular: 1.5° Surface Finish: Fine Machining	Modified by: Henrique	Drawing Publish Date: 18/11/2020
Projection Method: THIRD ANGLE	Sheet: 1 of 2 Sheet Size: A3 Drawing Scale: 1:2	Part Revision: - Drawing Rev.: -

