### **Engineering Drawing**

**Project** 

**(UTA015)** 

**First-Semester** 

First Year BE, ME

**Prepared for** 

Mr. Manpreet Singh

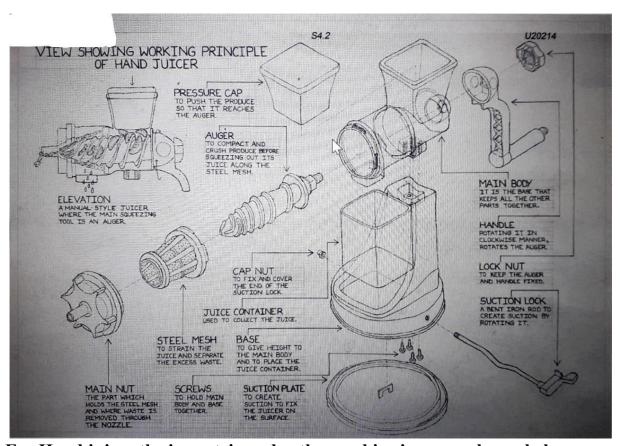
Thapar Institute of Engineering and Technology

**December 27, 2022** 

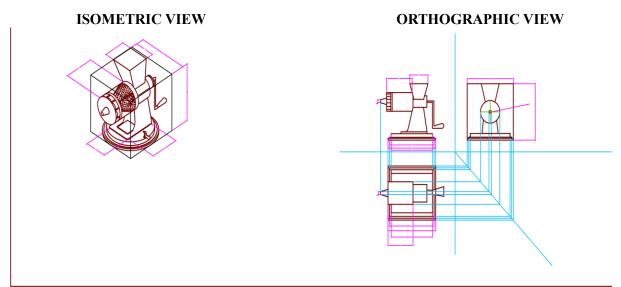


# THAPAR INSTITUTE OF ENGINEERING & TECHNOLOGY (Deemed to be University)

# A Hand Juicer, a common household item: The schematic below shows the working principle of Hand Juicer:



For Hand juicer the isometric and orthographic views are shown below:



#### **INDEX:**

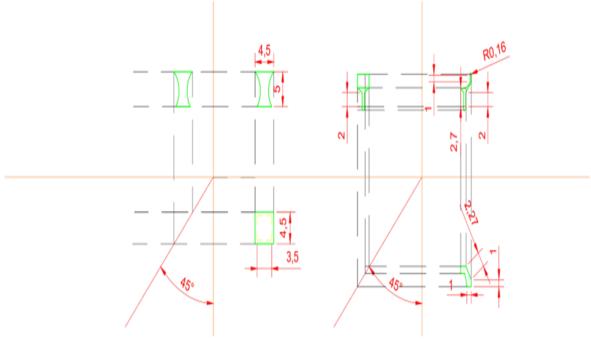
Purple: Dimensions Black: Construction Box Dark Purple: Object

**Light Blue: Construction Lines** 

Upper right region shows Left Hand Side View Upper left region shows Front View Lower left region shows Top View



For Hand juicer the isometric and orthographic views of some parts shown below:



**Components: Pressure Cap and Suction Lock** 

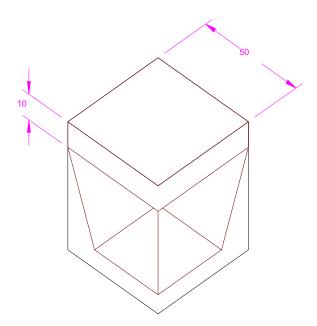
**INDEX:** 

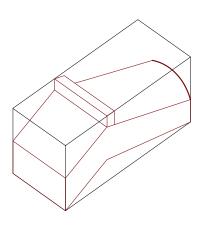
**Red: Dimensions Black: Construction Lines** 

Upper right region shows Front View Upper left region shows RHSV

Lower right region shows Top View

Green: Object Orange: Axis





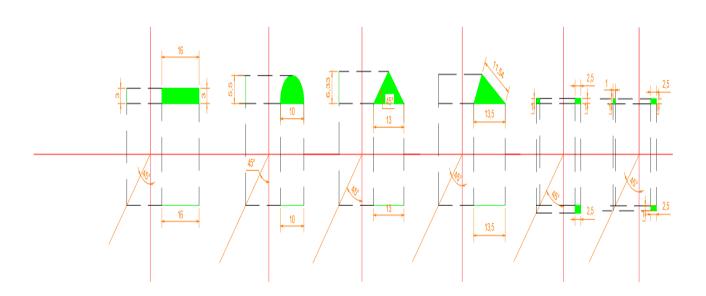
## **Bill of Materials:**

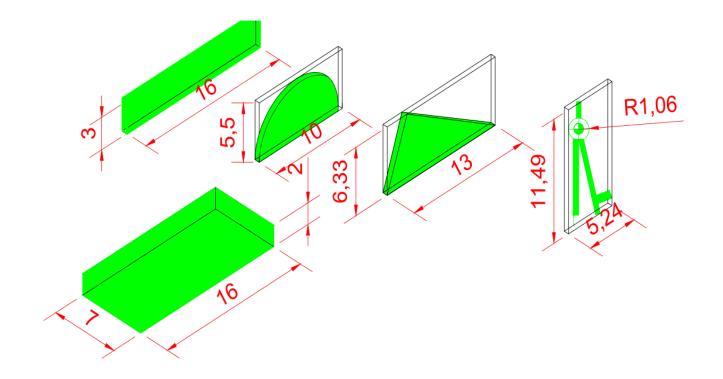
| Dill of Materials | <u> </u>        |            |          |                   |
|-------------------|-----------------|------------|----------|-------------------|
| Product No.       | Product Name    | No. of pa  | rts N    | Material          |
| 1                 | Pressure Cap    | 1 I        | Plastic  |                   |
| 2                 | Main Nut        | 1 I        | Plastic  |                   |
| 3                 | Steel Mesh 1    | Steel      |          |                   |
| 4                 | Auger           | 1 I        | Plastic  |                   |
| 5                 | Cap Nut         | 1 5        | Steel    |                   |
| 6                 | Main Body 1     | Plastic    |          |                   |
| 7                 | Screw           | 1 5        | Steel    |                   |
| 8                 | Suction Plate   | 1 I        | Rubber   |                   |
| 9                 | Base 1          | Plastic    |          |                   |
| 10                | Suction Lock    | 1 I        | Plastic  |                   |
| 11                | Lock Nut        | 1 1        | Plastic  |                   |
| 12                | Juice Container | 1 1        | Plastic  |                   |
| 13                | Elevation 1 Pla | istic 14 H | Iandle 1 | Plastic and Steel |
|                   |                 |            |          |                   |

## Geometry Box, a common stationary item:

The schematic below shows the pictures of geometry box along with isometric and orthographic views.





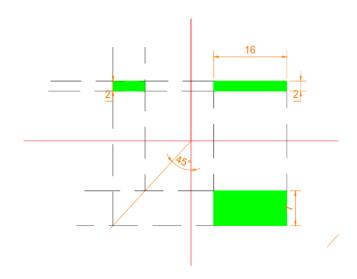


**INDEX:** 

Red: Dimensions Green: Object Orange: Axis

**Black: Construction Lines** 

Orthographic view of Geometric Box Upper Right-FV; Upper Left-RHSV Lower Right-TV



# Bill of Materials:

| Product No. | Product Name  | No. of parts | Material          |
|-------------|---------------|--------------|-------------------|
| 1           | Compass       | 1            | Plastic and Steel |
| 2           | Divider       | 1            | Plastic and Steel |
| 3           | Protactor     | 1            | Plastic and Steel |
| 4           | Set Square 45 | 1            | Plastic           |
| 5           | Set Square 60 | 1            | Plastic           |
| 6           | Roller        | 1            | Plastic           |
| 7           | Pencil        | 1            | Wood              |
| 8           | Eraser        | 1            | Rubber            |
| 9           | Sharpener     | 1            | Plastic           |