

# Manufacturing Process Summary:

## I. Raw Materials

The primary materials required for the manufacturing process are:

1. **M.S (Mild Steel) sheet**
2. **Handle**
3. **Hinges**
4. **Flap Disc** (for grinding/smoothing)
5. **Gas cylinder (\text{CO}\_2)**
6. **Welding wire (taar)**
7. **Back patti** (back strip/reinforcement)

## II. Production Steps

The manufacturing process involves several stages, from cutting the raw material to final finishing.

### 1. Cutting

- **Machine:** Cutting Machine
- **Workers:** Three workers.
- **Action:** Mild Steel (MS) sheets are cut to the required sizes.
- **Waste:** Approximately **7-8%** of the total sheets become wastage or scrap at this stage.

### 2. Shaping (Louvers)

- **Machine:** Power Press (Louver)
- **Workers:** One or two workers.
- **Action:** The cut sheets are sent to the Power Press to give them a **louver shape**. (*Note: This typically refers to pressing vents or slats into the metal.*)

### 3. Bending

- **Machine:** Bending Machine
- **Workers:** Two workers.
- **Action:** The sheets are bent according to the product's requirements.

### 4. Inner Spot Welding

- **Machine:** Spot Welding Machine
- **Workers:** One worker.
- **Action:** The worker **welds the inner parts** of the sheet, including materials like **Hinges**, **patla**, and **L patti**, working **from the inside** of the sheet.

## **5. Outer \text{CO}\_2 Welding**

- **Machine:** \text{CO}\_2 Welding Machine
- **Workers:** One worker.
- **Action:** The worker joints all the external parts like the lock, lock clip, back patti, and handle by welding from the outside of the box.

## **6. Grinding and Smoothing**

- **Machine:** Grinding Machine
- **Workers:** One worker.
- **Action:** The worker smoothes the welded areas using the grinding machine to prepare the surface for finishing.

## **7. Final Finishing and Inspection**

- **Area:** Final Finishing Area
- **Action:** After grinding, the product is sent here for final checks to ensure it is completely okay and meets quality standards.

## **III. Final Stage**

- **Action:** After the final finishing and inspection, the product goes to colouring (painting or powder coating).