## Modular Designing And Standardization

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# **Modular Design**

- Modular design, or "modularity in design", is a design approach that subdivides a system into smaller parts called modules, that can be independently created and then used in different systems
- Examples of modular systems are <u>cars</u>, <u>computers</u>, <u>process systems</u>, <u>solar panels</u> and <u>elevators</u> and modular buildings.
- Aspects of modular design can be seen in cars or other vehicles to the extent of there being certain parts to the car that can be added or removed without altering the rest of the car.

# Advantage of Modular Design

#### Easier diagnosis and remedy of failures

#### Easier repair and replacement

Simplifications of manufacturing and assembly.

And it adds flexibility to both production and marketing

Large product become easier to monitor and control

Product maintenance is easier

Disadvantage of Modular Design

# Limited number of possible product configuration

Limited ability to repair a faulty module

### **Standardization**

It means producing maximum variety of products from the minimum variety of tools, parts and material.

➢It is the process of establishing standards or unit of measure by which extent, quality, quantity, value performance etc. may be compared and measured.

It reduce the varieties of raw material used

## Advantages of Standardization

Benefits to Production Planning Department-

Scope for improved methods, processes and layouts.

Better resource allocation

Reduction in pre production activities

Benefit to Manufacturing Department-

Lower unit cost with better quality products.

Better utilization manpower and equipments.

Better services of production control, stock control, purchasing control etc.

Benefits to Quality Control Department-

Better inspection and quality control is possible .

➢Quality standards can be defined more clearly.

➢ Reduce reduction and scraps.

**Disadvantages of Standardization-**

> Decreased variety of end products results in less consumer appeal and thereby affecting the competitive advantage for the firm.

Design may be frozen with too many imperfections remaining.

Standard once set resist change and it may become an obstacle to progress.

