

## 2) a) BUCKET CONVEYOR:-

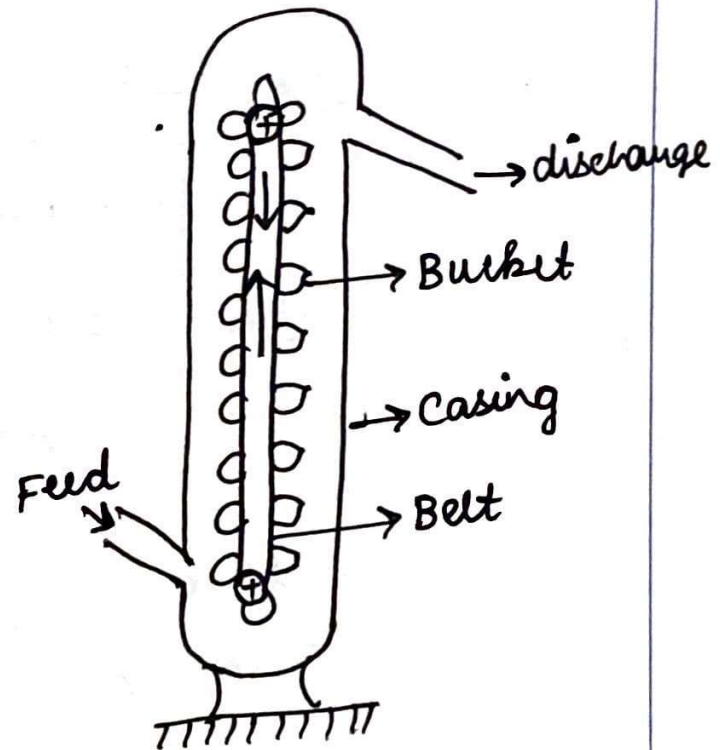
★ BC consist of endless chains or lifts to which are attached buckets to convey bulk material in horizontal, inclined and vertical paths

### 3 Types

- Centrifugal Bucket Conveyor
- Continuous BC
- Positive discharge BC

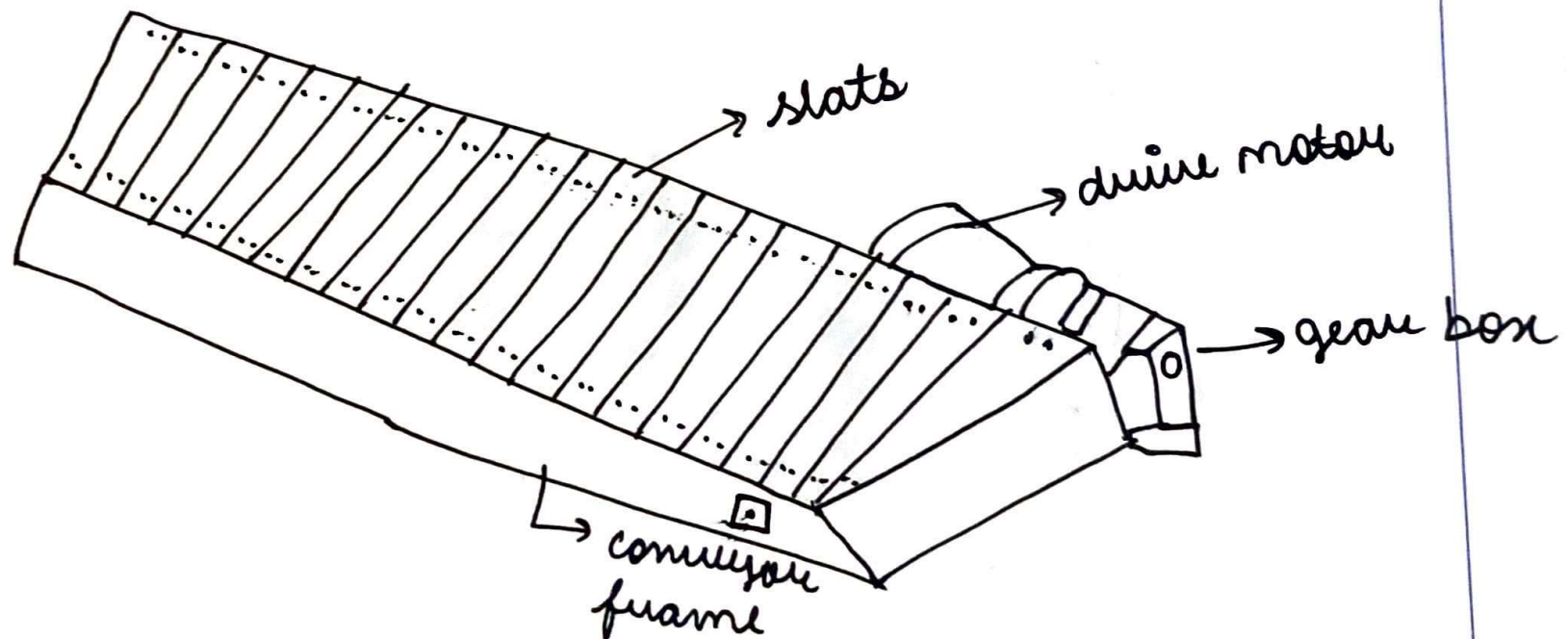
### Working / Construction:-

- ★ It is used for vertical lifts
- ★ Buckets are fixed on chain which moves on two wheels
- ★ Buckets are loaded at the bottom discharged at the top



b) slat Conveyor:-

- ★ SC use a slat and chain system to move components along an assembly line
- ★ They are often used where production operations are performed with the parts located on the conveyor
- ★ Steel panels are attached to the chain with special chain attachments
- ★ The chain is driven by an electric motor & gearbox



## 1) CONVEYOR SYSTEMS:-

- ★ Moves materials from one location to another location.
- ★ Mechanical Device
- ★ Involving the transportation of heavy (or) Bulky materials

### DESIGNING A CONVEYOR SYSTEM:-

- 1) Capacity requirement
- 2) Length of travel
- 3) Material characteristics
- 4) Processing requirements
- 5) Life expectancy
- 6) Costs

### MAIN ELEMENTS OF CONVEYORS:-

#### 1) CONVEYOR DRIVES:-

- ★ Conveyor drives may account for from 10% to 30% of the total cost of the conveyor system, depending on specific job requirements.
- ★ They may be of either fixed-speed or adjustable-speed type.
- ★ Adjustable-speed drives are designed for changing speed either manually or automatically while the conveyor is in operation, to meet variations in processing requirements.



## 2) CONVEYOR MOTORS:-

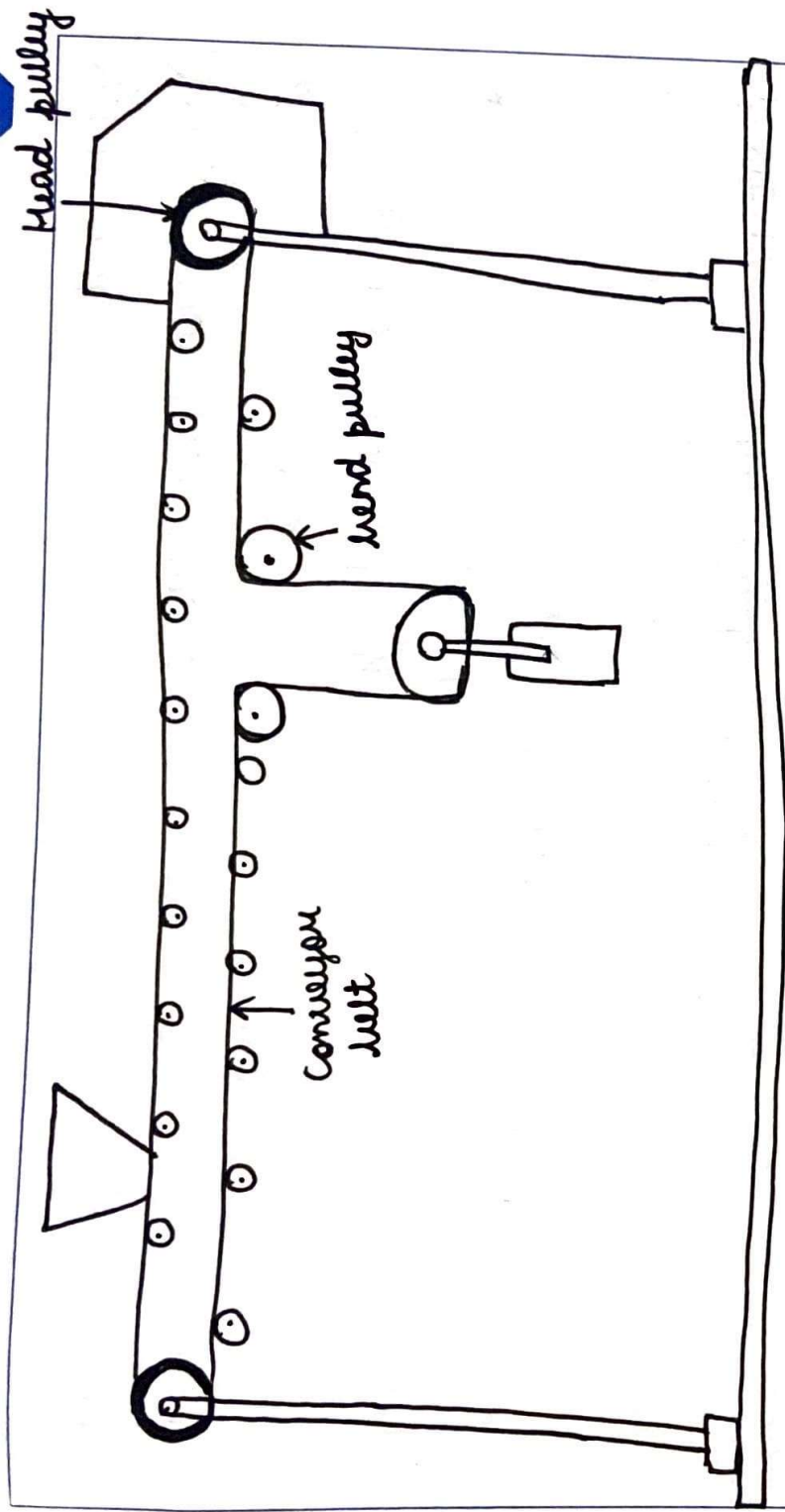
- ★ Conveyor motors for conveyor drives are generally of 240- and 480-V ratings.
- ★ The squirrel-cage motor is most commonly used with belt conveyors and with drives upto 7.457 kW (10 hp).

## 3) CONTROL OF CONVEYORS:-

- ★ Control has been enhanced considerably
- ★ With the introduction of process-control computers and programmable controllers which can be used to maintain rated capacities.
- ★ Through variable-speed drives, outputs can be adjusted automatically for changes in processing conditions.

## WORKING OF BELT CONVEYOR:-

- ★ Belt conveyor is composed by two pulleys and a closed conveyor belt.
- ★ The pulley that pulls conveyor belt is called drive pulley.
- ★ The other one is only used to change conveyor belt movement direction called the head pulley.
- ★ Drive pulley is driven by the motor.
- ★ Drive pulley is installed at the discharge end.
- ★ Material is fed on the feed-side and landed on the rotating conveyor belt.



#### TYPES:-

- 1) Chute Conveyor
- 2) Wheel Conveyor
- 3) Roller Conveyor
- 4) Gravity Conveyor
- 5) Chain Conveyor
- 6) Flight Conveyor
- 7) Apron Conveyor
- 8) Closed Conveyor
- 9) Slot Conveyor
- 10) Continuous flow Conveyor