

## FAQ

### Module-10: Brakes

#### 1) What is the main advantage and disadvantage of simple block brake?

The main advantage is that it applies uniform pressure over drum due to small area of contact between the shoe and drum. So the wear on the shoe would be uniform; a longer life for the shoe. The main disadvantage is the friction force acting parallel to the lever tends to unseat the block. If the lever is far away from the drum (using thick block), the unseating force may be large enough to displace the block from its working position.

#### 2) What is the source of force $F$ acting on the lap rack in piano-feed regulation?

As the lap size is continuously increasing, it physically pushes the rack up, thus exerting an upward force  $F$  on the rack.

#### 3) What is the source of actuating force on spindle brake?

The brake lever is placed at a height in level with the knee of operator. When the operator presses his knee on the lever, actuating force is applied on the brake to stop the spindle during piecing of yarn ends.

4) What is the main advantage of differential band brake compared with simple band brake?

In simple band brake, the tight side of band is connected to the pivot of lever, which requires a large actuating force. In differential band brake, the tight side of band is connected to the lever away from the pivot and in opposite side to the actuating force. In this case, the moments of actuating force and tight tension act in the same sense (direction), which helps in reducing the magnitude of actuating force or power consumption.

5) What is the sequence of operations in multi-disk clutch and brake when machine is started and stopped?

When the machine is started, brake should disengage (non-braking) followed by engaging of clutch. While stopping the machine, the clutch should disengage followed by braking.