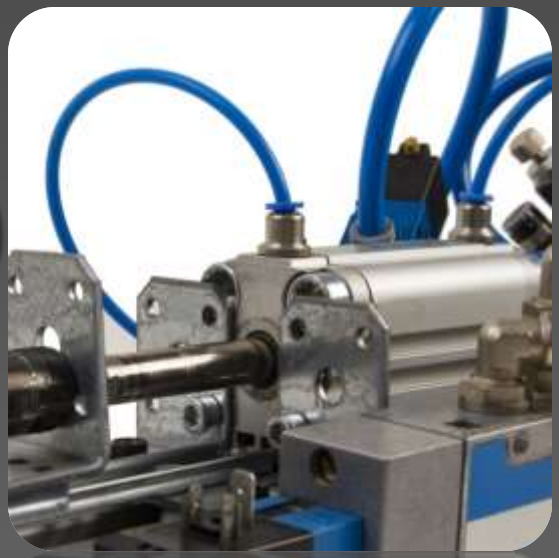
OVERVIEW OF PNEUMATIC

Objectives

- Introduction to Pneumatic
- Methods of Power Transmission
- What is Pneumatic ?
- Why Pneumatic ?
- Safety On Pneumatics System.
- Application
- Basic Components of Pneumatic System
- Pneumatic System Path
- Basic Principal

Introduction to Pneumatic

PNEUMA : Breath Of Air (in Greek Word)

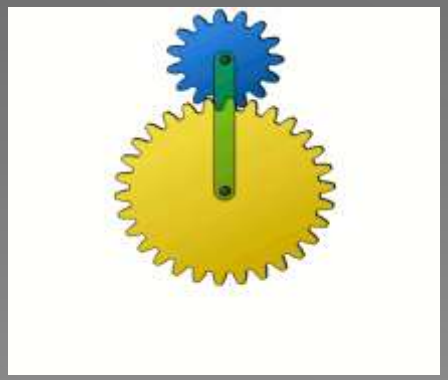


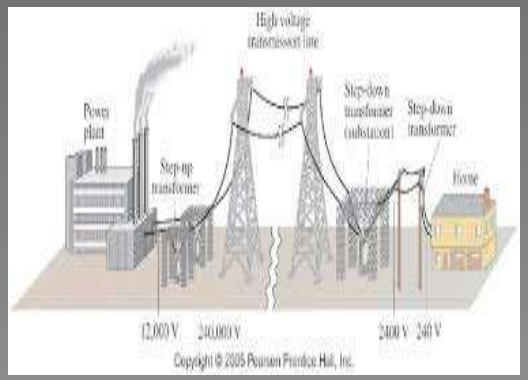
Subject deals with "PNEUMA"/ compressed air is called as "Pneumatics"

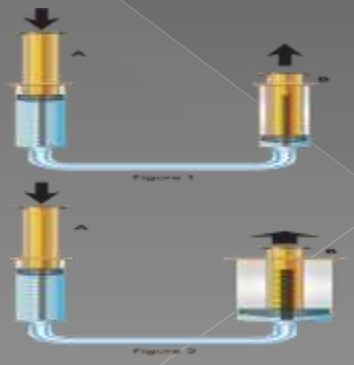
Methods of Power Transmission

Methods of Power Transmission

- **Mechanical**
- **Electrical**
- **Fluid Power**







What is Pneumatic ?

Pneumatics Is a type of power Transmission that uses compressed air to create a motion.

It Comes under Fluid Power Transmission

Fluid Power Transmission 2 types.

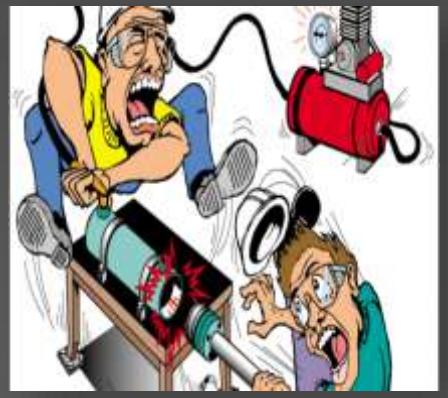
1. **Pneumatics**
2. **Hydraulics.**

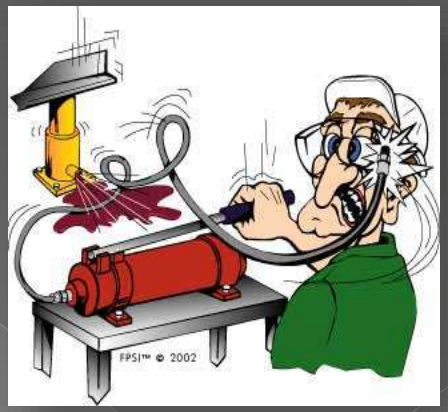
Why Pneumatic ?

- High Speed
- Easily available
- Low Cost
- Reliability
- Long service life
- Storage Capacity
- Transportable

Safety On Pneumatics System

- Never use finger to detect whether Compressed air present or not.
- Keep compressed air away from eyes, nose, mouth etc.
- Never stand in front of cylinder during forward stroke.
- Always work at a sensible air pressure of 2.5 bar to maximum 4 bar in testing and laboratories purpose.
- Industrial load can be from 10 bar to 200 bar.





Application

- Clamping
- Shifting
- Feeding
- Ejection
- Braking
- Locking
- Transferring

Basic Components of Pneumatic System

Pneumatic Systems usually contain:

Compressor
Storage Tanks
Valves
Regulators
Actuators

Connectors and tubes

Valves

- Valves Control the air flow in a pneumatic system.
- It also controls the flow of Exhaust air to the atmosphere.
- It can start and stop a pneumatic signal.

Types of Valves

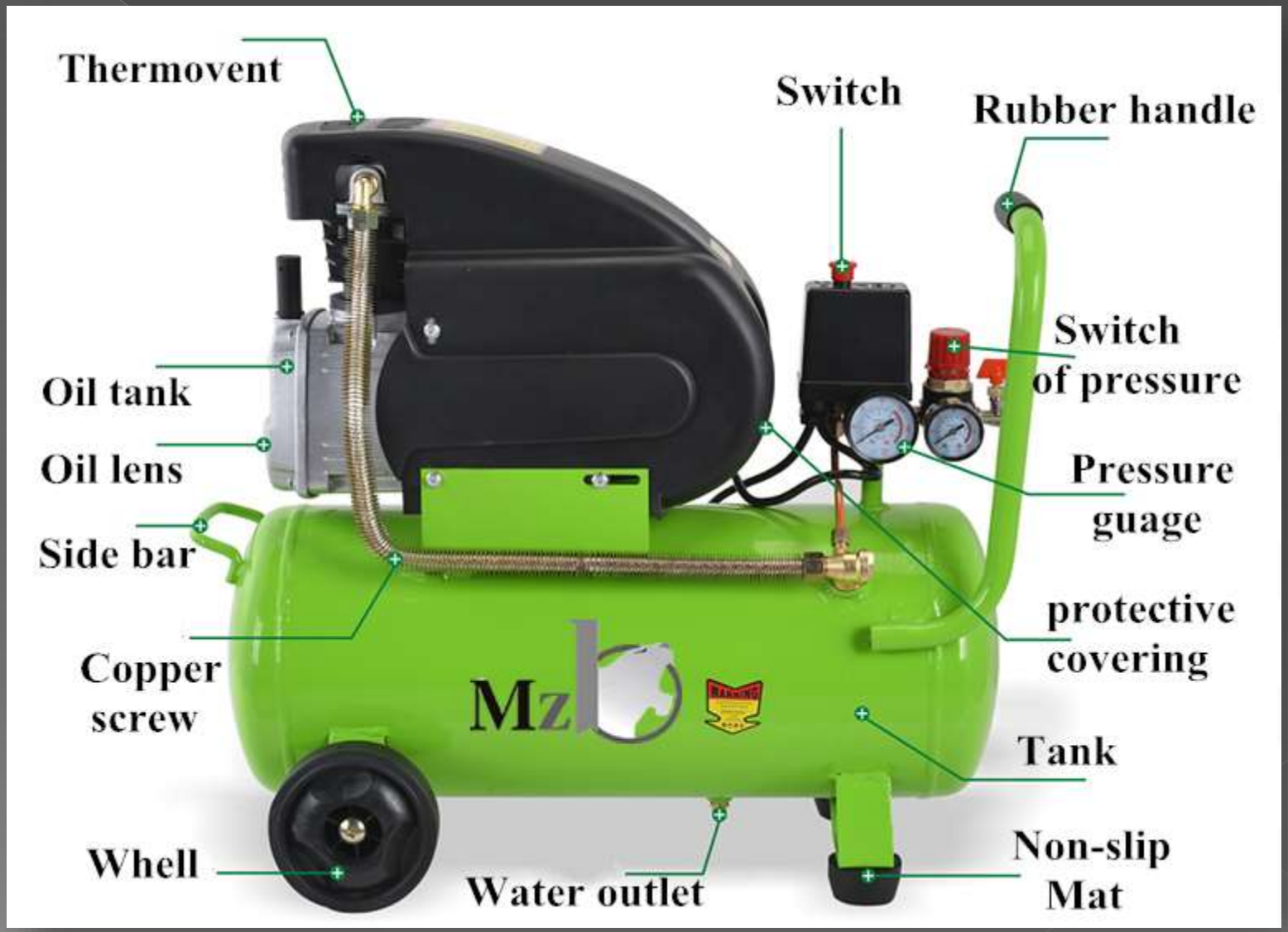
Directional Control Valve

Flow Control Valve

Shuttle Valve (or)

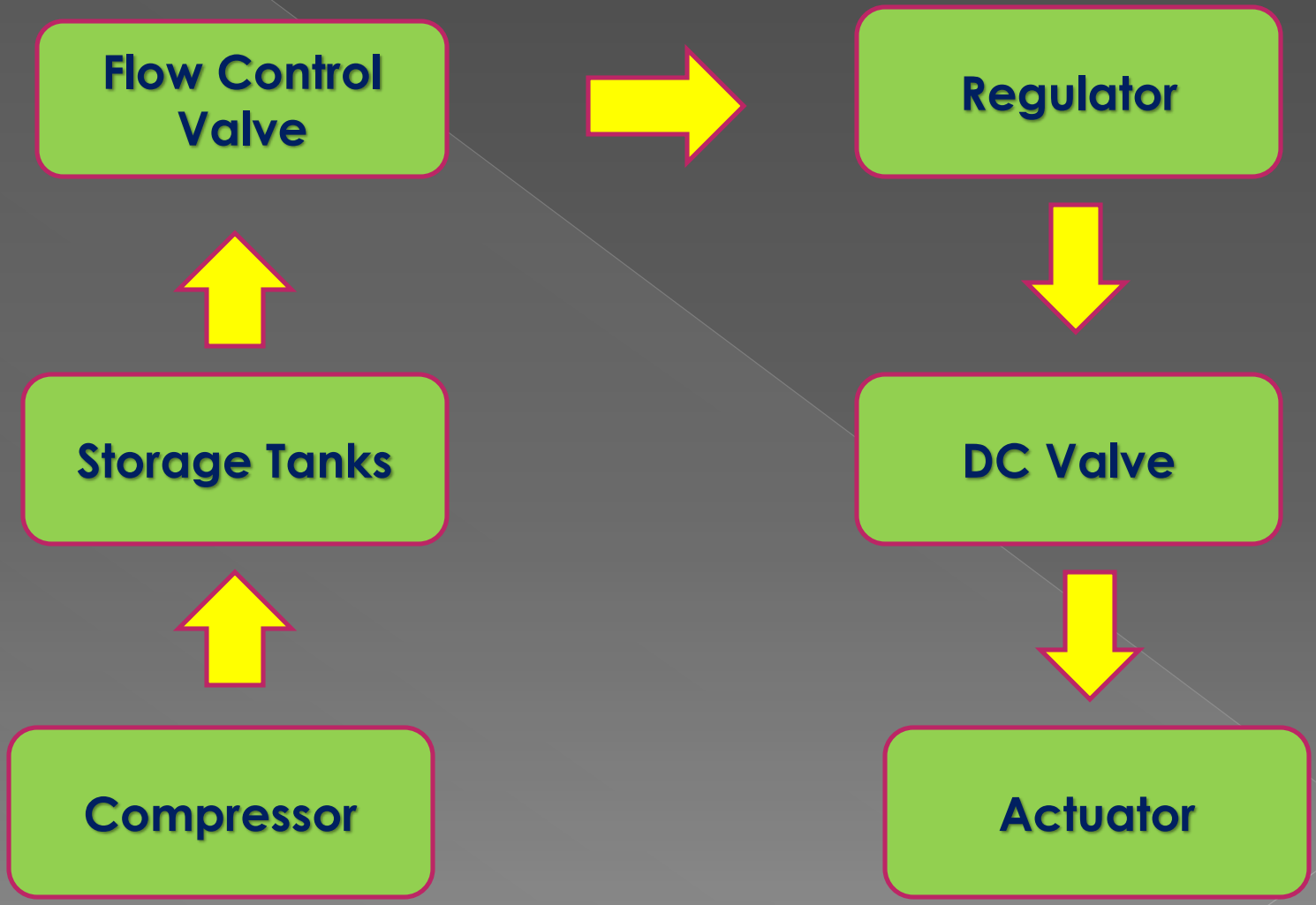
Dual Pressure Valve(And)

Compressor


Thermovent
Switch
Rubber handle
Switch of pressure
Oil tank
Oil lens
Pressure guage
Side bar
protective covering
Copper screw
Tank
Whell
Water outlet
Non-slip Mat

Actuators

Pneumatic System Path

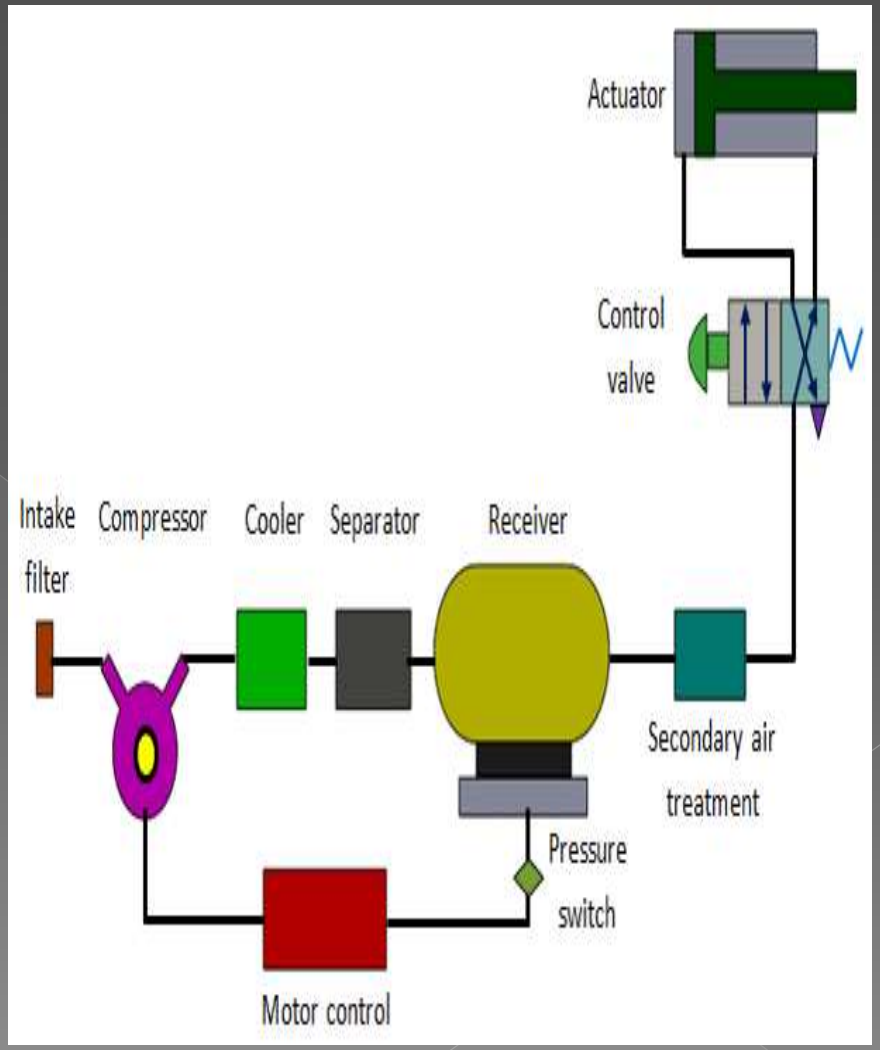


Basic Principal

- Pneumatic systems is consisting of a source of compressed air which is controlled by valves and entered to cylinders to get out puts.

- The compressed air is obtained from a compressor.

- Air is flown through pipes and connectors to valves which control the flow of compressed air.



Thank You…

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