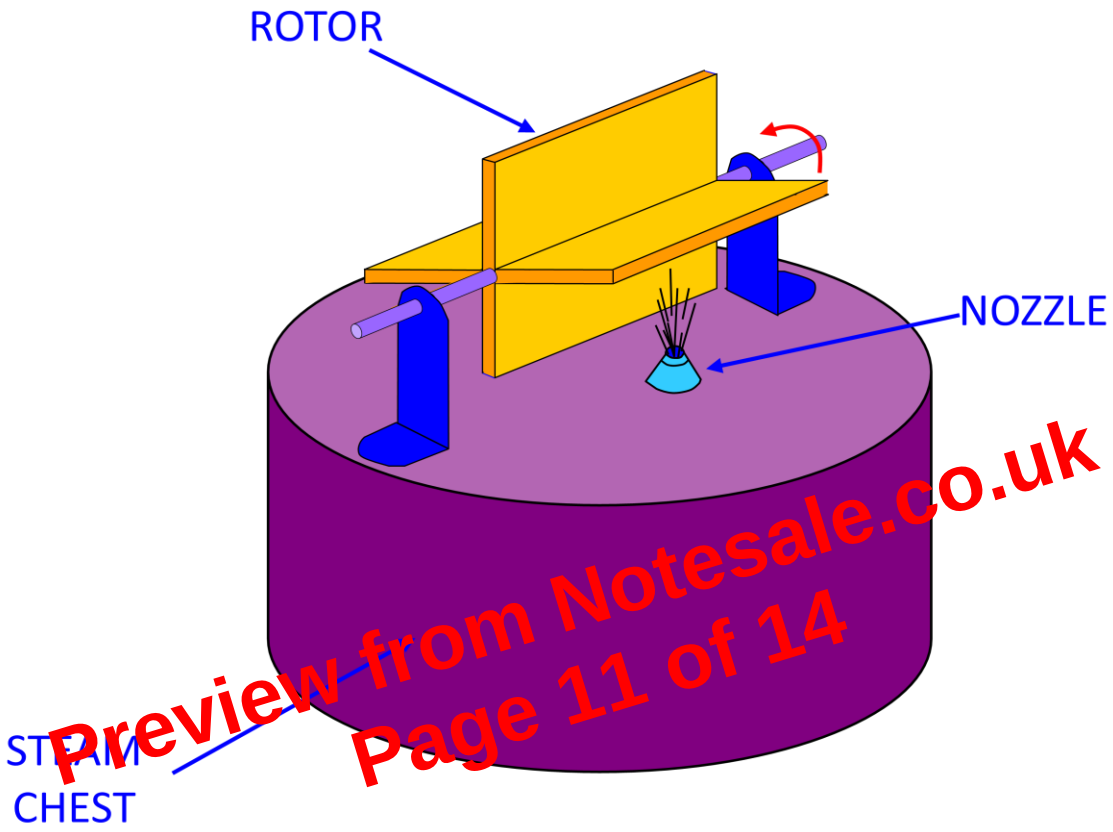
Systematic Diagram of Impulse turbine



Reaction Turbine

In this type of turbine, there is a gradual pressure drop and takes place continuously over the fixed and moving blades. The rotation of the shaft and drum, which carrying the blades is the result of both impulse and reactive force in the steam. The reaction turbine consist of a row of stationary blades and the following row of moving blades. The fixed blades act as a nozzle which are attached inside the cylinder and the moving blades are fixed with the rotor as shown in figure When the steam expands over the blades there is gradual increase in volume and decrease in pressure. But the velocity decrease in the moving blades and increases in fixed blades with change of direction.

Because of the pressure drops in each stage, the number of stages required in a reaction turbine is much greater than in a impulse turbine of same capacity. It also concluded that as the volume of steam increases at lower pressures therefore the diameter of the turbine must increase after each group of blade rings.

Systematic diagram of Reaction Turbine