

# Beam dyeing Machine

This method is similar to package dyeing is simply Description: Beam a **much larger version of package dyeing**. but is more economical. Yarn is wound on to a perforated warp beam or perforated cylinders, which is then placed in the beam dyeing machine where the flow of the dye bath alternates as in package dyeing.



## BEAM DYEING INFORMATION

1. Dyeing Information
2. Beam Dyeing Information



The beam dyeing machine is suited to process a wide range of knitted and woven textiles. The fabric in open width is rolled on to a perforated beam, then subsequently loaded into a vessel that is closed and pressurized. The dye impregnates the fabric as the dye liquor is allowed to go on circulating through the perforations (holes) in the beam. Usually, the beam dyeing machines are designed to hold a single beam.

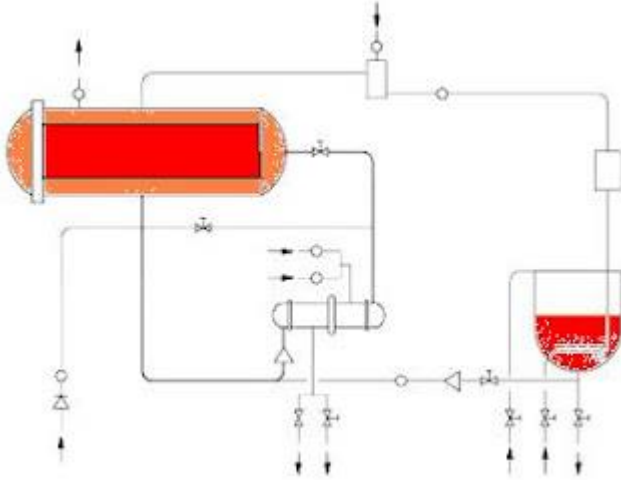
The fabric is placed under controlled tension, and is wound on to a perforated beam. This results in the elimination of creases on the fabric.

The fabric is restricted to non-movement during the dyeing process. This means that there is no mechanical application of action to the fabric, the actual dyeing process is motionless. The

fabric remains stationary in the vessel as the pressure of the pump forces the dye liquor through the fabric roll.

### Beam Dyeing Machines

#### Beam dyeing machine



A machine for dyeing yarns or fabrics that have been wound onto a special beam that has evenly perforated holes along its barrel. The dye is forced through the barrel into the yarn/fabric from inside to outside and vice versa. The beam dyeing machines may be capable of dyeing a single beam or to dye multiple beams. The fabric or yarn have better dyeing results because of there is no dimensional changes as well as there is no mechanical force applied to it. The high-performance pumps circulate the dye liquor in efficient manner to achieve even dyeing results. The working principle is same as that of HTHP yarn dyeing machines. The process of beam dyeing is as follows,

1. The fabric or yarn in open width is rolled on to a perforated beam.
2. The beam then subsequently inserted into a dyeing vessel.
3. The machine is closed and pressurized.
4. The dye liquor is circulated in to out and out to in directions, under pressure and temperature is employed as per the process requirement.
5. The chemicals and auxiliary are injected as per requirement of the process.

## Advantages of Beam Dyeing Machine

- i. The fabric is put under controlled tension, and is wound on to a perforated beam. This consequence in removal of creases from the fabric. It as well ensures total manage of dimensions of the roll of fabric.
- ii. The fabric is held in a attached position during the procedure of dyeing. This in fact means that there is no application of mechanical action on to the fabric. As revealed in the figure, there is no movement of the fabric as the hydrostatic pressure of the pump forces the dye liquor throughout the fabric roll.

