



ISO 9001 : 2015  
MAKE IN INDIA

# PRODUCT CATALOGUE

**ADVANCE TECHNOLOGY FOR  
TEXTILE DYEING INDUSTRIES**

**-WATER  
-ENERGY  
+SAVINGS  
+ENVIRONMENT**



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www.smwdyeing.com

# WELCOME TO SHARMAN MECHANICAL WORKS

Established in 1967 under the leadership of Mr. Shri Ram Sharma , an Mechanical engineer with more than 3 decades of experience in the Textile and Apparel Manufacturing Industry, S M W India is dealing in textile machinery, as well as providing consulting services in the field. We strive to provide the best machines and deals to our clients, with unparalleled after sales services and support. Our skillful technicians are able to help clients in the installation, operating guidance and maintenance.

S M W deals in textile machinery such as Dyeing and Processing machines.

The S M W group abides to International Standards of quality control and safety in every step of design, manufacturing and assembly. All machines are in compliance with local technical regulatory authorities. Certifications like IBR are provided according to customer's requirement. Further more, S M W operates under the standards of ISO 9001 since 2000.



Mr. Krishan Kant Sharma  
(Chairman SMW)



Mr. Jatin Sharma  
(Technical Advisor)



Mr. Vipin Sharma  
(Sales & Marketing Head)

## Our Team

S M W traces its roots back more than 53 years, when it forayed into manufacturing of stainless steel equipment.

Today, six decades later, the scope of activities of S M W has expanded to include operations that cover a diverse range of industrial applications.

This has been made possible by its constant endeavor to upgrade technology. This endeavor is supported by a highly efficient and modern Research and Development laboratory, with its team of well trained engineers .

The company has introduced several new products, the most significant of these being the following four major product lines...



# Our Products Rang

Thoroughly checked & tested for quality, our Testing Instruments are right answer to all testing needs of laboratories. Mentioned below is our scope of products.

## ► DYEING

- Packages
- Rope Dyeing
- Hanks
- Loose Stock Fiber
- Tops
- Tow
- Muffs
- Beams

## ► BLEACHING

- Medical Cotton Wool
  1. Automatic Lab Yarn Dyeing Machine
  2. Vertical package Dyeing

## ► YARN CONDITIONING AUTOCLAVE

## ► DRYING

- Hot Air Dryer
- Packages
- Hanks

## ► PNEUMATIC PRESS AND DRYING CARRIERS

### SUITABLE MATERIALS



### SUITABLE FORMS



# SMW

## High Temperature Fiber Yarn Dyeing Machine



High-end quality, cutting-edge sustainable technologies and very low running costs



# PACKAGES

## (1) YARN DYEING MACHINE

### SMDY ENERGY SAVING

The consumption of water, chemicals, electrical energy, thermal energy and the wasted water are important cost factors in every dye house. With this machine all these factors are dramatically reduced, measured and controlled. Right-first-time in dyeing is now assured by lower differences inside-outside the packages, while savings of electric energy, water, chemicals, steam and compressed air will bring extremely fast payback times over the initial investment cost.



New SMDY sizes are from 5 kg to 1500 kg. This machine with this particular pump and inversion group allows to treat polyester textured high density till 0,5 Kg/l as well as very soft material like silk 0,3 kg/l density in order to process every kind of material you can have in your dye house.

In particular can dye bobbin 1.8 kg cotton, 2,4 kg acrylic, polyester 4 kg or 10 kg tops or muffs, tow, flock or beams

### MAIN ADVANTAGES ARE:

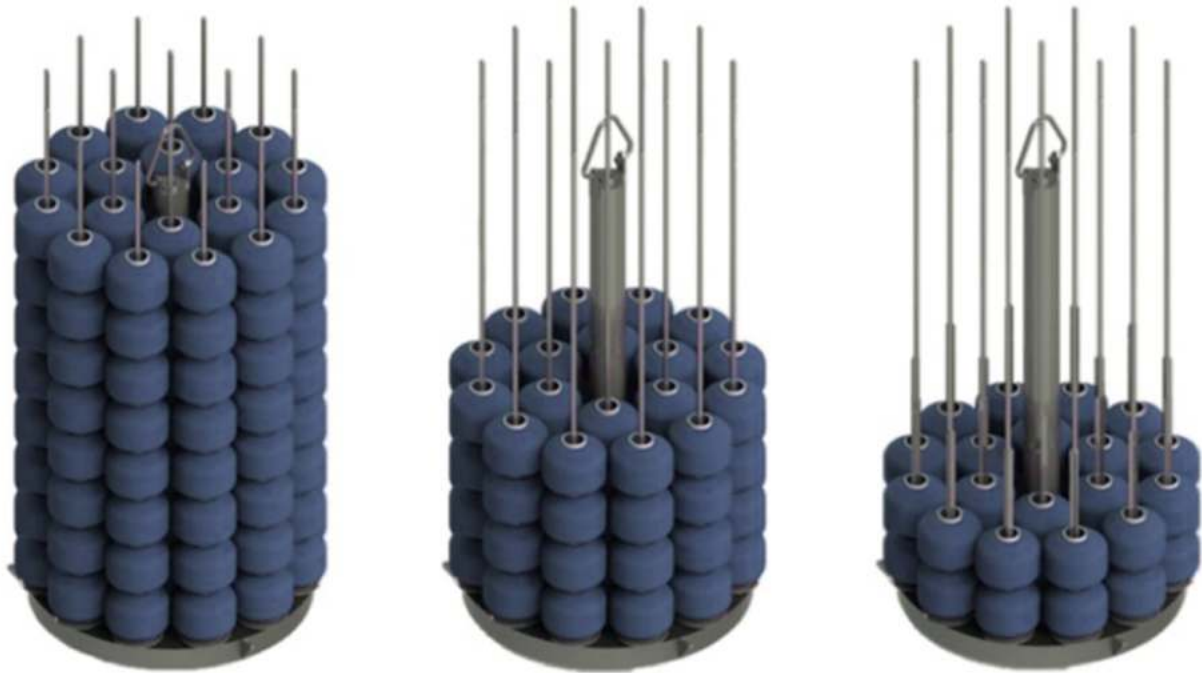
Possibility to dye with liquor ratio from 1:3.5 using in to out single circulation with material not fully covered.

Reduce consumption of chemicals, dyes, water and steam due to low liquor ratio facility.

Reduce power consumption of main pump because pipes are designed to avoid losses of pressure so that main pump is exploited in the best way. High efficiency motor and inverter reduces power consumption as well. Possibility to dye also in traditional way: air pad, material fully covered and flow circulation in to out and out to in directions.

### SMDY FEATURES:

- Standard design and manufacturing features:
- Nominal loading capacities from 5 to 1500 kg.
- Pressure rating of 5.0 kg/cm<sup>2</sup>, up to 160°C temperature, temperature lock at 140°C.
- Construction in AISI 316 stainless steel, for all the part in contact with dyeing liquor.
- Water protected motors (IEC Standards I).
- Waterproof electrical equipment
- Three-level safety systems..
- Heat exchangers rated for 15.0 kg/cm<sup>2</sup> operating pressure.
- Heating gradient 5°C./minute (range 20-80°C steam pressure 6.0 kg/cm<sup>2</sup>) Cooling gradient 3°C./minute (range 130-108°C water temp. 15°C, pressure 1.5 kg/cm<sup>2</sup>).
- Pneumatic lid lifting and lowering.
- Rapid lid locking system.



**Carrier for Packages**

**THIS IS OUR NEW SMDY YARN DYEING MACHINE!**

**Yarn dyeing, reinvented!**

**70% savings on electric energy**

**30% savings on water, chemicals and utilities**

**Improved yarn dyeing quality**

**Faster payback times**

**Sustainable yarn dyeing**





**SMWMPBY1**

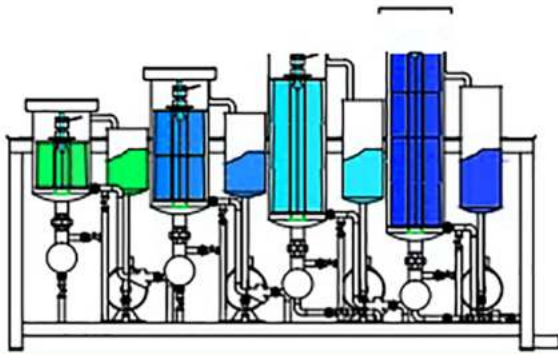


**SMWMPBY2**



**SMWMPBY3**





## 2 HT/HP MULTI POT SAMPLE DYEING

SMW Multi Pot Sample Dyeing Machine is ideal to run 2, 4, 6, & 8 Pots coupled to each other, dyeing yarns of same colour or running individually to facilitate dyeing yarn of different colours simultaneously. This is very useful for standardizing the recipes of dyeing before batches are taken in bulk. This avoids trial and error methods, hence saves time and resources utilized. Each pot has a range from 100 gms. To 1.5 kg. per batch as per the requirement. The apparatus allows sampling trails in laboratory. Each vessel can be charged with different type of materials. Each kier has its own pump and controller. Main feature of this machine is a perfect reproducibility from laboratory to bulk production. The machines are available with different levels of automations. The machine is suitable for dyeing of Polyester, Cotton, Viscose, Nylon, Acrylic, Texturized, Silk, Wool, etc. in various forms like Cone, Tape, Narrow Fabrics, Zipper, Hanks, Ribbons, Tops & Loose Fiber.

### TECHNICAL SPECIFICATION:

|                             |   |                                                        |
|-----------------------------|---|--------------------------------------------------------|
| Type of Fibers / Fabric     | : | Silk, Polyester, Light weight cotton, Wool etc.        |
| Maximum working temperature | : | 140°C                                                  |
| Maximum working pressure    | : | 6kg                                                    |
| Heating Rate                | : | Low temperature 2°C / High temperature 5.5°C           |
| Cooling Rate                | : | Water cooling system                                   |
| MOC                         | : | SS316                                                  |
| Capacity                    | : | to 300gms                                              |
| Panel Board                 | : | Fully automatic                                        |
| Application                 | : | For sampling number of yarns separately in one machine |

### FEATURES:

1. Machine body & all parts coming into contact with the dye liquor are made of AISI SS 316Ti/316L, highly corrosion resistant
2. Turbo pump for liquor circulation (In-Out & Out-In) with Inverter drive for varying speed
3. Control panel with JOGSON dyeing programmer TPR13I/PLC & touch interface (Optional)
4. MLR of 1:4 to 1:16
5. Air pad system to insert air manually into the machine to create static pressure and to minimize the liquor ratio
6. Colour addition tank with Injection Pump for dozing the dye liquor into the machine
7. High efficient heat exchanger which has no heat loss to the ambient (Optional)
8. HT Drain - the machine can be drained at 130° C
9. Pneumatically operated front door locking / unlocking
10. Human/Machine safety interlocks



# AUTOMATIC LAB DYEING MACHINE



We have all the requisite facilities to manufacture and offer a technologically advanced range of Sample Dyeing Machine / Single Package / Pilot Yarn Dyeing Machine. Manufactured using quality materials, these are appropriate for dyeing of loose fibers, tops, tows, yarn packages and yarn beams with suitable material carriers.

## Main Features:

1. Savings of water, chemical, heat & electrical energy
2. Design ensures complete drain of \_liquor



## SPECIFICATIONS:

1. Capacity from 1 kg to 5 kg
  2. Very low liquor ratio from 1:3 to 1:5
  3. Wo. temp up to 140 °C
  4. Wo. Pr. Up to 4 kg/cm<sup>2</sup>
- Additional Information:  
Minimum Order Quantity: 1 Number

## ADVANTAGES

1. Multiple pots on single table which cover less area
2. Compact arrangement of SMW turbo pump, heat exchanger and piping is the main key to floor space saving
3. Inverter driven turbo pump for variable flow control; saves upto 40% power consumption hence more Energy Efficient
4. HT drain at 130°C for oligomers elimination during polyester dyeing process
5. Excellent dyeing result and levelness, reduces yarn loss
6. Water level, pressure, distinctive temperature multiple safety interlock, ensure operational safety



**SMWLABIN**



# HT/HP VERTICAL TUBULAR DYEING MACHINE

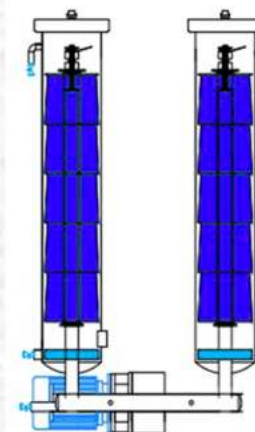




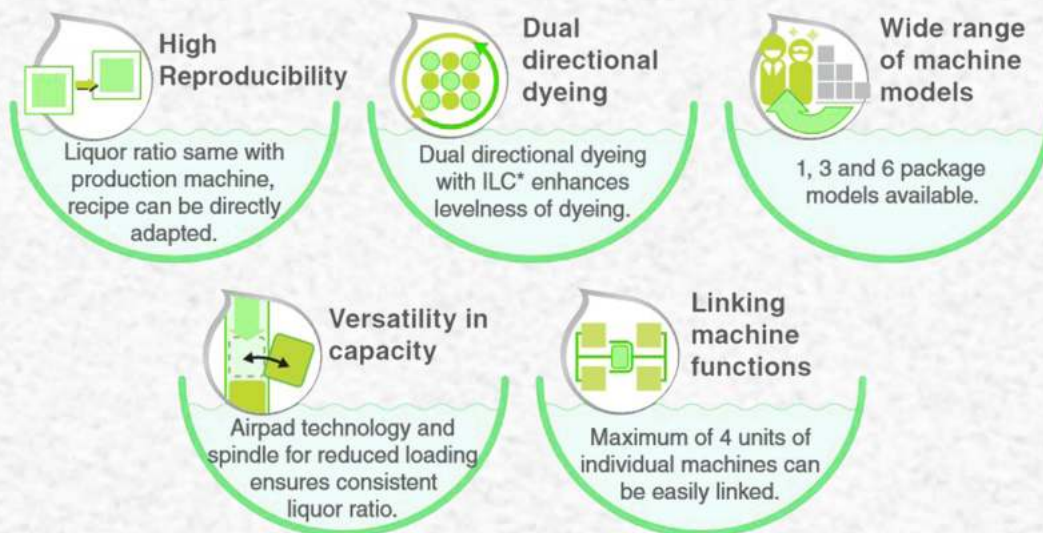
Package Yarn Dyeing Machine 60kg for cones or hanks. The dyeing machine is used for dyeing yarn at high temperature and high pressure. Our expert technicians ensure that it is manufactured using fine grade material, procured from the most authentic vendors of the industry. The body of the machine is fabricated using high grade stainless steel in order to assure durability and resistance to corrosion. We fabricate these machines using premium quality raw material that is procured from the most credible vendors of the industry.

## Main Features:

1. Capacity range from 1 kg to 500 kg
2. Very low liquor ratio from 1:3 to 1:5
3. Loading up to 30% possible
4. Savings of water, chemical, heat & electrical energy
5. Coil type heat exchanger for efficient and fast heat transfer
6. Design ensures complete drain of liquor
7. Pneumatic cylinder lift door with Heavy Clamp locking system
8. Hydraulic safety locking for door
9. Large Saving of capital and operational cost




**SMW**  
Tubular Dyeing  
System



## Application:

1. Yarn Packages
2. Zipper Tapes
3. Small width Fabrics
4. Loose fibres



## Advantages:

1. Compact arrangement of SMW turbo pump, heat exchanger and piping is the main key to floor space saving
2. Ultra Low MLR of 1:3, consumes less dyestuff, chemicals, steam, water & produces less effluent discharge, hence it's ECO friendly & reduces the Production Cost
3. Inverter driven turbo pump for variable flow control; saves upto 40% power consumption hence more Energy Efficient
4. HT drain at 130°C for oligomers elimination during polyester dyeing process
5. Variable loading with dummies maintains constant MLR & Flow Rate
6. Excellent dyeing result and levelness, reduces yarn loss
7. Water level, pressure, distinctive temperature multiple safety interlock, ensure operational safety

## Additional Information:

- Item Code: SMDYTU1

|                   |                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------|
| Material          | SS316L                                                                                                    |
| Capacity          | 60 Kg                                                                                                     |
| Usage/Application | CONE DYEING , ZIPPIER DYEING ,<br>NARROW TAPE DYEING ,VISCOS DYEING ,<br>HANK DYEING , COTTON DYEING , PO |
| Machine Type      | Automatic                                                                                                 |
| Power Consumption | 4 to 12Kw                                                                                                 |
| Shape             | Round                                                                                                     |
| Voltage           | 220 - 440 (v)                                                                                             |
| Phase             | 3 phase                                                                                                   |
| Wash Motor Power  | 5.5 Kw                                                                                                    |
| Country of Origin | Made in India                                                                                             |



# HTHP Horizontal Tubular Dyeing System



## **Saving Energy and Resources**

Low liquor system saves process water, cooling water, steam, chemicals, dyestuffs and electric power. About 30 min from 25°C up to 140°C, about 20 min from 140°C down to 80°C.

## **\* Wide application**

This is a universal application machine which may accomplish various treatments such as bleaching dyeing and scouring etc.



**\* Special Pump**

Special designed pump is centrifugal type, high head and large flow rate.

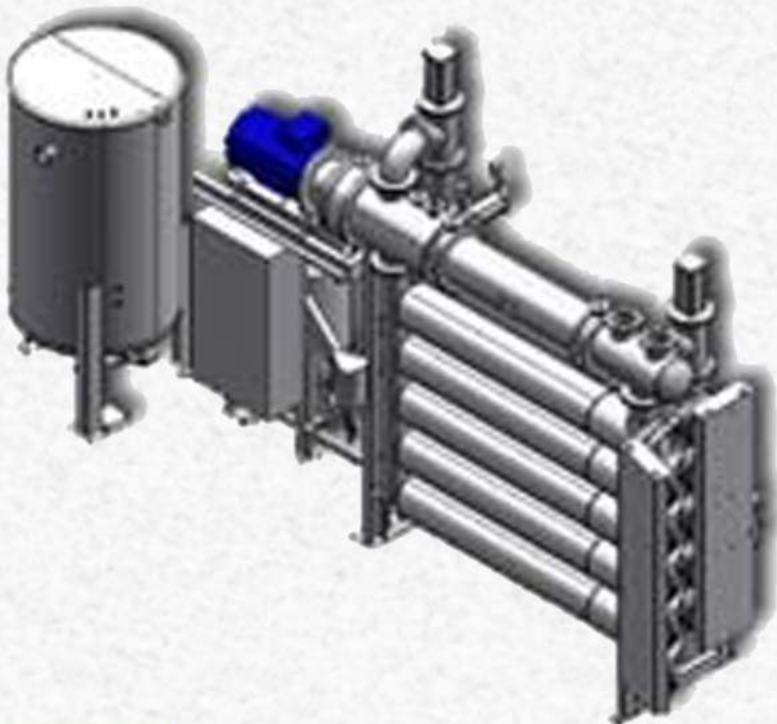
**\* Easy and Safe Operation**

Door opening and closing all use automatic aricylinder operation. Temperature and time can be set optionally by electric control panel. Auto or semiauto can be chosen optionally. Easy for operation.

HT-HP type cheese dyeing machine is a pneumatically controlled, high temperature, high pressure dyeing machine, it can be used with a wide variety of fibers (natual, synthetic etc.) at low liquor retios.

Our yarn-dyeing machines may operate in coordination with the following dyeing plates. Standard accessoried include two press-type cheese carrier.

We have a variety of bobbins readily avaioble to you, and may manufacture such to your own specifications.



**-Water**  
**-Energy**  
**+Savings**  
**+Environment**

## Features:

1. Large capacity and short drying time, suitable for various fabrics cone, loose, zipper of polyester or rayon.
2. Very low consumption of steam and water for cooling, as the cooler is typically designed of a special liquid centrifugal.
3. High efficiency of heat exchange in capable of recovering of heat for saving energy.
4. Full automatic control system of drying ensuring uniformity without over drying or twisting proble



## Options:

- PLC based touch screen panel.
- Fully auto mode operation includes Filling, circulation, dosing of dyestuff & chemicals, drain, operator call.
- VFD driven main pump.
- Thermo flush.
- PH Monitoring System.
- Online flow meter.
- Differential pressure system.
- Selective drain for heat recovery.
- Compressed air hydro extraction system.

|                   |                    |
|-------------------|--------------------|
| Material          | SS304 , 316L       |
| Capacity          | 10 kg to 1500 kg   |
| Machine Type      | Automatic          |
| Voltage           | 220 - 440 volt (v) |
| Phase             | 3 phase            |
| 8Wash Motor Power | 10 HP              |
| Country of Origin | Made in India      |



# Vertical Cone Dyeing Machine



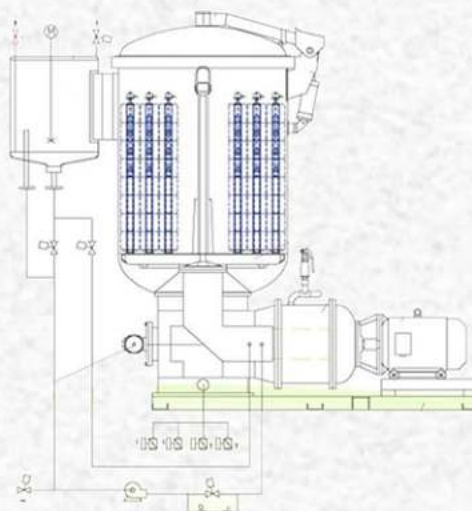
HTHP vertical dyeing machines are faster growing in the markets. We are manufacturing high temperature vertical yarn dyeing machine with latest quality and trending designed, best selling machine on textile company with highly experienced in yarn dyeing machine. Sharman Mechanical Works are manufacturers, suppliers and exporters of vertical yarn dyeing machine with long lasting features and international standards. HTHP vertical yarn dyeing machines have been creating for Fabric and yarn dyeing such as Ribbon, Top, Hank, and Zippers. Our machine is dyeing 10 to 1500kg at a one time. Features: 1. All machine part approaching into deal with the dye is finished of AISI SS 316L, extremely oxidisation resistance 2. Dual stage turbo pumps for liquor movement (In & Out) with inverter drive for varying speeds 3. MLR of 1:6 (Fully Submerged) 1:5 (Air Pad Systems) 4. Air pad systems to inserts air manually into the machines to design fixed density and to minimize the ratio 5. Addition tank with injection pump colour for tired the dyeing machine 6. Heat exchangers inbuilt to machine having heat minimize 7. Flexible and variable loading speed 8. Checking and Sampling dyeing machine while operating 9. Human / Machines Security Connects Optional Feature



1. Several fills
2. Various drains
3. Several heating systems such as electric heater, steams & gas/diesel flame
4. Stock tank with fully capacity & mixing agitator with heating transfer pumps
5. ph meters
6. Hydro extractions systems

**Technical Data:**

1. Maximum design pressure 6 bar
2. Maximum design temperature 160°C
3. Heating gradient 25°C - 130°C approx. at 5°C/min. (Dry saturated steam pressure at 7 bar)
4. Cooling gradient 130°C - 85°C approx. at 3.5°C/min. (Cold water of 25°C at 3 bar)



• **SMWPYP TURBO PUMP**

- The heart of RBNV-I dyeing machine is the extremely efficient sMWPYP type liquor circulation pump, which is a mixed design between an axial and a centrifugal impeller, specifically designed to cover the complete range of differential pressures from 0.2 up to 2.5 Bar.

• **Quick operation Flexible loading kit**



Quick operation  
conjugation tube

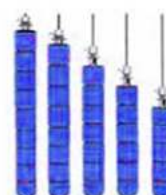


"Up-Right" bottom disc/leak  
proof at the bottom of spindle

from carrier



SMW leak proof  
fastener



Flexible loadig to  
maintain liquor ratio

**TECHNICAL DATA**

|                    |                                                                                                          |
|--------------------|----------------------------------------------------------------------------------------------------------|
| Design temperature | 140°C                                                                                                    |
| Design pressure    | 5.2bar                                                                                                   |
| Heating gradient   | 25°C ~ 100°C approx. 4.5°C/min<br>100°C ~ 130°C approx. 2.5°C/min (dry saturated steam pressure at 7bar) |
| Cooling gradient   | 130°C ~ 100°C approx. 3°C/min<br>100°C ~ 80°C approx. 2°C/min (cooling water at 3bar, 25°C)              |



## Additional Information:

- Production Capacity: 15 DAYS
- Delivery Time: 15 DAYS

**This is our new SMDY yarn dyeing machine!**

**Yarn dyeing, reinvented!**

**70% savings on electric energy**

**30% savings on water, chemicals and utilities**

**Improved yarn dyeing quality**

**Faster payback times**



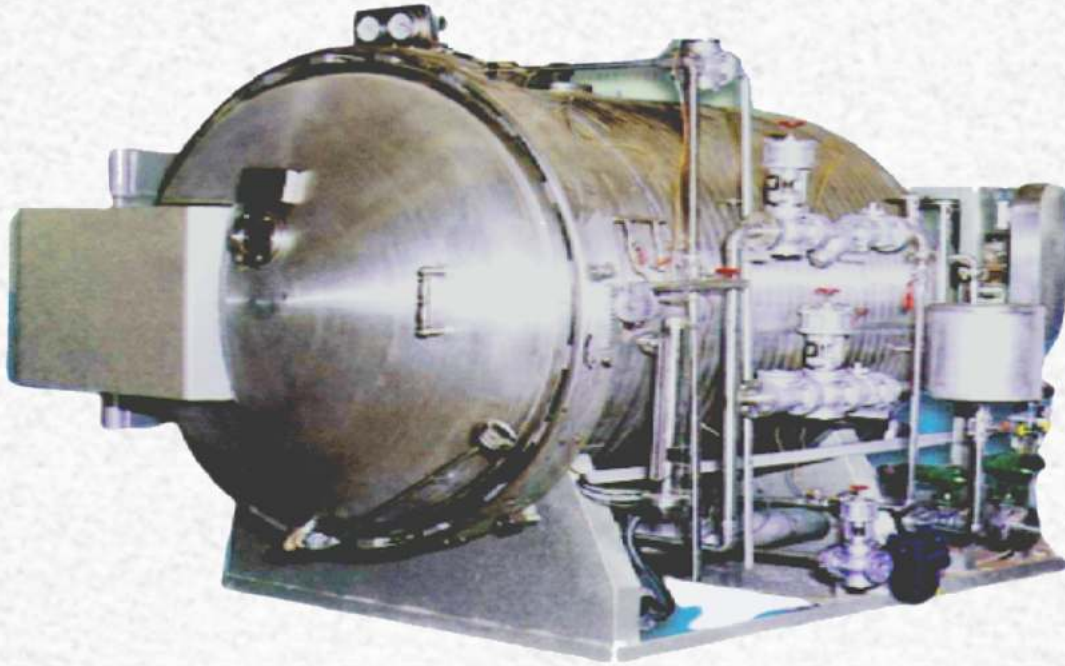
**HTHP Zipper Dyeing Machine**



**HTHP Loos Fiber Dyeing Machine**



# HTHP Horizontal of Yarn Dyeing Machine



S M W offers a complete choice of products of machines for dyeing yarns. We offer the best horizontal yarn dyeing machine across India. We provide textile machinery services. Our technical experts help the customers to install and maintain the machine. Also, they aid the clients to properly operate the machines. We follow all the standards of safety and quality control. S M W is a certified firm. We aim to design, manufacture, and assemble the machines. Also, we use fine quality material to develop the machines. Hence, we assure you that the machines we make are robust and rust-resistant.

S M W constructs the machines using high-quality raw materials. Also, we get these raw materials from a reliable dealer. We aim for 100% customer-satisfaction. Thus, we supply the yarn dyeing machine on-time without any defects. Quality is the main factor to gain the trust of the customers. So, we focus to supply the finest quality machines. S M W has a culture to put the customers first. Therefore, we make high quality and efficient machines to deliver the best designs





## Ecology and Environment:

- **Lower Consumption.** Only pump and carrier volumes are flooded, with reduction of liquor ratio to a minimum water, steam and power consumption. Substantial savings are realized in term of cooling water, steam and electric power.
- **Low Emissions.** The air pad operates as a double chamber to reduce heat emissions in the dye-house.

| Item          | Water Savings | Electricity Savings | Steam Savings | Chemicals Savings |
|---------------|---------------|---------------------|---------------|-------------------|
| Deep Shades   | 23.2%         | 15.0%               | 17.2%         | 23.1%             |
| Medium Shades | 16.7%         | 14.5%               | 18.6%         | 23.1%             |
| Pale Shades   | 14.8%         | 14.5%               | 18.6%         | 23.1%             |

- **Lower Consumption.** Only pump and carrier volumes are flooded, with reduction of liquor ratio to a minimum water, steam and power consumption. Substantial savings are realized in term of cooling water, steam and electric power.
- **Low Emissions.** The air pad operates as a double chamber to reduce heat emissions in the dye-house. NO external Expansion Tank means no emission of chemical vapours. NO external Expansion Tank means no continuous external circulation, thus liquor expansion volume realized directly into the autoclave.
- Dyestuff exhaustion is perfectly equalized.
- Air pad pressurization allows to inject dyestuffs and chemicals directly into the main liquor circuit by means of single tank or a multi tank colour-kitchen.
- Air Pad Pressurization allows the machine to be standard equipped with dynamic HYDRO-EXTRACTION DEVICE by compressed air.
- **VAT DYEING:** During cotton dyeing with VAT dyestuffs the dyeing liquor is not subject to a continuous oxidation by external air.

### 1. Suitable for Various Material Types



Package



Muff



Hank



Warp Beam



Loose Fibre



Zipper



Tape



Magic Tape



# Horizontal Textile Dyeing Yarn Conditioning Machine



**High Speed Hydro Extractor  
For Yarn Cone Hanks Fiber  
& Fabrics/Zipper**



# Pneumataic Press & Dyeing Carriers



**Pneumatic Press**



**Cone Dyeing Carrier**



**Hank & Loose  
Fiber Carrier**



**Narrow Tape Dyeing Carrier**



**Zipper Bobbin Carrier**



## Installed Plants Worldwide







*Thanks You*



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