

CHAPTER 10

FEATURES OF SOME WEAVING PREPARATORY AND WEAVING MACHINES

It is worthwhile to introduce the entrepreneurs with some features of imported and indigenous weaving machines. Our objective is to introduce the technology and not to further the interest of any particular manufacture. If any machine is not enlisted here or not represented in any way, it should not be construed as favour or disfavor to anyone. The entrepreneurs should not be passive recipient of any information but they should go all out to know each detail of machine viz. capacity, production and cost. They have to follow sound practice of adoption to newer technology.

A. Toyota Air Jet Loom (JAT 710):



The JAT 710 is designed with the concept of "weaving the highest quality fabric at the lowest possible cost," and boasts improved features such as higher speed, lower vibration and lower energy consumption. Plus it is equipped with the latest electronics technology such as a new Internet-capable color function panel, taking today's weaving mill into a new dimension.

Salient Features:

- Speed – 1250 rpm (190cm. Width) with minimum vibration
- Weft insertion: single electric drum, 2, 4, 6-color exchange electric drum and weft insertion by main nozzle, sub nozzle, stretch nozzle, and short pitch sub nozzles. Solenoid weft cutter, which can be adjusted from panel
- Nominal reed space: 140 cm, 150 cm, 170 cm, 190 cm, 210 cm, 230 cm, 250 cm, 280 cm, 340 cm, 360 cm, 390 cm
- Shedding: negative cam, positive cam, crank, dobby, electric shedding, jacquard, CPU microprocessors unit for controlling all systems of loom
- Selvage: left/right rotary full-leno selvage device
- Operator can set patterns, dwell and shed crossing time
- Option for double beam attachment driven by servo motor
- Super start-up motor, speed control by inverter, Toyota monitoring system

1) **Toyota Automatic Drawing-in Machine (SDM100):**



Salient Features:

The SDM100 is the world's first air-jet automatic drawing-in machine. In addition to facilitating improved fabric quality, it accomplishes streamlining of the work required to draw in warp yarns.

Main specifications

Drawing-in width	1,500mm	2,300mm
Yarn types	synthetic, cotton, wool, glass fiber	
Drawing-in speed*	80 ends/min	
Heald type	simplex and duplex for flat and riderless healds	
Heald dimensions	mail 1.2 mmx5.5 mm-1.8 mmx6.5 mm, length 280-330 mm	
Number of heald frames	4, 16 or 20 heald frames	
Unit size (L x D x H)	3.0 x 2.0x2.2 (Drawing-in width: 1,500 mm)	3.8x2.0x2.2 (Drawing-in width: 2,300 mm)

2) **Toyota Water Jet Loom (LW 600):**



Salient Features:

Toyota Industries has developed the LW600 Water-Jet Loom in pursuit of higher speed, quality, ease of operation, and cost efficiency. This loom has feeder measuring system and its improved pump and nozzle allow soft jet insertion with reduced water consumption. It is well-suited to weaving synthetic fabrics rather than natural fabrics such as cotton.

Main Specification

- Weft insertion: single, 2-color pick-at-will
- Nominal reed space: 150 cm, 170 cm, 180 cm, 190 cm, 210 cm, 230 cm
- Shedding: crank, dobby, cam
- Let-off: electronic let-off motion
- 1500 rpm with weft mixer, infrared feeler, automatic weft finder, weft brake system, electronic colour selector, self catch cord shedding device
- Air pull back lever for weaving high twist yarn.

B. Sulzer Shuttleless Weaving Machine

1) Sulzer Projectile Weaving Machine (P7300 HP):

Salient Features:

Projectile weaving machines Sulzer Textil match all of the textile industry's quality and performance standards. With projectile weft insertion practically any type of yarn can be woven, e.g. cotton, wool, silk, monofilament, multifilament, tapes, even hard fibres such as jute and linen. Whether fine or coarse, all yarns are reliably gripped and inserted by the projectile. The machine can have 2-4 pick weft insertions in the shed.

Main Specification

- Lowest specific power consumption of all weaving systems
- Tucked selvages
- Quick warp and style changing
- Electrically controlled let-off and take-up motion
- Weft insertion: single, 2 to 6-color pick-at-will and up to 1570 m/min
- Available in nine working width ranging from 190 cm to 540 cm
- Shedding: dobby (up to 18 shafts), Tappet (up to 14 shafts)

2) Sulzer Rapiere weaving machine (GS 500):

Salient Features:

With the rapier-weaving machine Sulzer Textil GS 500, there are virtually no limits to creativity. Designed as a true all-rounder, it weaves not only worsted and woolen yarns but also fine and coarse spun yarns (cotton and man-made fibres), delicate filament yarns, finest silks, fancy glass yarns, and even metal threads, all with optimum performance.

Rapier weaving machines Sulzer Textil GS 500 can also be used in terry weaving, from simple standard fabrics to jacquard-patterned guest towels. All of these fabrics meet the highest quality standards. Rapier weaving machines are also used with great success to produce industrial fabrics, e.g. high-grade airbag or glass fabrics.

Main Specification

- Quick warp and style changing
- Electrically controlled let-off and take-up motion
- Weft insertion: single or two at a time, 4 to 12-color and up to 1620 m/min
- Available in ten working width ranging from 170 cm to 360 cm
- Shedding: Positive dobby (up to 20 shafts), Electronic Jacquard

3) Sulzer Air-jet weaving machine (L9400):



Salient Features:

The completely new air-jet weaving machine Sulzer Textil L9400 has been designed specifically for producing industrial textiles in large widths up to 540 centimetres. This weaving machine sets new standards as regards weaving width, performance, stability and operator-friendliness. In combination with Sulzer Textil PowerLeno, half-leno fabrics can now be produced on the L9400 more economically.

Main Specification

- Weft insertion rate up to 2700 m/min.
- Speed of up to 500 picks/min.
- Equipped with latest electronics and touch-screen terminal.
- Equipped with PowerLeno.
- Available widths: 430 cm, 460 cm, 540 cm.
- Low-mass warp tension.

C. Tsudakoma Airjet Loom (ZAX) :



Voil Curtain Weaving

Salient Features: Model ZAX 9100:

- Direct start motor to eliminate starting marks, weave navigation system, high speed of 1800-2000 mpm (Width 190 cms).
- WSB weft brake system to reduce peak weft tension during weft insertion,

- Sub-nozzle timing control to handle different thickness of weft (even elastic), twin-nozzle valve, stretch nozzle valve to reduce air consumption
- Electronic Take Up, automatic data storage, electronic shedding system driven by servomotor, 16 shaft, Tuck-in device
- PSC Programmable speed control to vary the loom speed for different weft counts

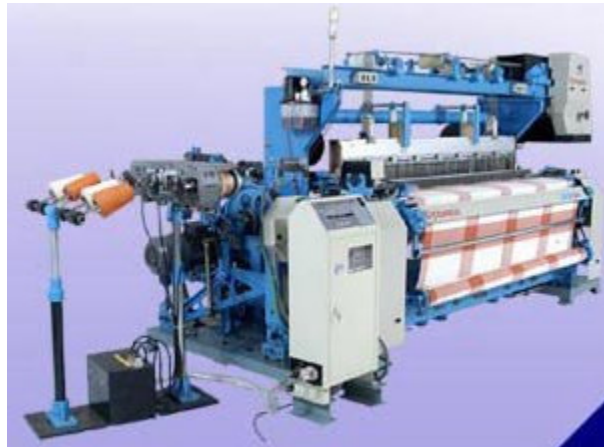


Worsted Weaving

Salient Features: Model ZAX – e:

- Suitable particularly for Terry Weaving.
- The main feature of this loom is the Pile Tension is controlled with the TMC Terry Motion, which minimize Warp breakages, resulting in Piles with a good feeling even at high-speed operation.

D. Dynamic Rapier Loom (Shiva):



Salient Features:

- Designed for quality weaving independent of worker's Skill, due to it's simple design for operation and perfect safety device including rapier motion useful for stable weft insertion, Electronic weft detection by infrared sensor and electric dropper motion and anti crack device.
- Available for versatile weaving of yarns including Polyester, Nylon, Fancy yarns, non-twisted, high twisted and spun yarns.
- Equipped with the advanced systems such microprocessor controller, Weft color selector available for eight different colors, anti-crack device, for perfect and stable weaving performance.

- Production cost will be lowered through high productivity and minimize rapier parts cost. Automatic forced lubrication is used for the minimize lubrication cost. The machine is extremely simple and is easily taught.
- Each device is designed slidable for easier adjustment of weaving range.

E. Jaytex Fully Automatic Warp Tying m/c:



Salient Features:

Tying installations, which requires a minimum of time for changing the warp contributes a lot to the efficiencies and low stoppage rates of the high performance looms. JAYTEX warp tying equipment fulfills this requirement to a large degree. Jaytex is the pioneer in developing warp tying equipment with 100% Indigenous components. End to end warp tying at a high speed, directly on loom along with healds, reeds etc.

The working range of this machine is practically unlimited it can tie any material with or without lease may it be cotton, spun, worsted, filament, P.V. or woolen from finest to coarsest with high efficiency at low labour cost. Easy adaptability to different tying methods at any time. Maintenance free timing belt drive in all the machines. It is a guarantee for service, spares & economy. Can offer training program at your site.

1. Jaytex Warp Dressing Frame:



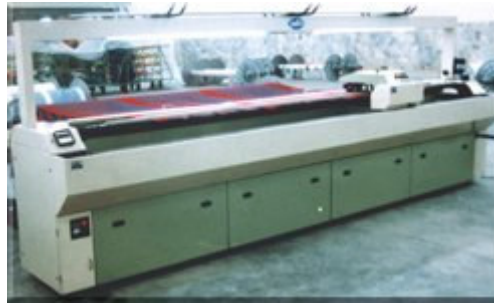
Salient Features:

Jaytex frames are manufactured as per your requirement in height & width ranging between 120 cms (50") up to 400 cms (160") with in this range every requested width can be accommodated in stages of 25 cms (10"). For twin beams your choice are either one frame covering both the warp beam width, or one single frame with double side clamping system or

two single frame with coupling device. Double width, separable frame permit rationalized working on looms with twin warps. The separated tying frame can also be used for looms of normal widths.

For faster dressing and easy clamping of coarser warps below 12's, it is recommend to use its HD/UB type frames, provided with very sturdy U type rubberized, alloy clamps, with oval shaped EN-9 steel bars. Clamping system of Jaytex dressing frame is designed to press the entire warp sheet in parallel and firm condition. Rubbers on both the sides of tension rails guarantees firm grip to the most slippery and fine warp.

2. Jaytex Fully Automatic Warp Leasing-in Machine:



Salient Features:

One of the most important stages in the preparation of warps for weaving is the insertion of the lease. This process establishes the warp ends in the sequence prescribed by the warper or beamer. It is especially important to have the correct sequence in densely set of patterned warps, as well as in warps containing fine yarns, such as synthetics, filament or worsted yarns. By using Jaytex universal warp Leasing-In machine the preparatory process in your weaving will become highly rationalized, all type of sized warps can be automatically and correctly leased at a high speed. Leasing each and every warp end means arresting them in their original position, and not allowing them to migrate.

It Helps;

- Consequently it improves.
- Even tensioning to each warp over the entire width.
- Reduction in fluffiness in the warps.
- Reduces end breakages during weaving.
- Frequent loom stoppage is reduced.
- Improves the quality of woven products.
- Rationalizing the preparatory process.
- Fully Automatic. The machine can be left alone during operation.

This machine is must for high speed and jet looms. It is boon to the filament single and sizers and weavers. It is of high productivity at low labour cost.

3. Jaytex Warp Reaching-in Machine:



Salient Features:

Jaytex warp Reaching-in equipment is used by most of the large weaving mills, in India and abroad. Semi automatic requires only one drawer. 100% Indigenous. Sturdy and durable frame work. Suitable for all type of yarn cotton, synthetic, blends, woolen blends with different colors and patterns in single warp sheet. Suitable for all types of warp beams, heald frames, droppers and reeds. Wide range of R.S. width, according to your loom bean size.

- Semi-automatic.
- Requires one drawer only.
- Important component made from special alloy.
- Can be used with or without lease.
- Easy to learn and maintain.

F. Laxmi Store Flexible Terry Weaving Machine (CMTR):

Salient Features:

- Easy to Operate
- Low Noise
- Steady Weft Insertions
- Low Maintenance Cost

Specifications:

Driving System	By Push Button Control On Both Side Of Loom
Running Speed	200-220 RPM
Reed width	150 - 220 cm

Driving Motor	1.5 kw
Braking System	By Electromagnetic Brake
Effective Reed Width	Maximum: 70 mm Less Than Reed Space. Minimum: 300 mm Less Than Reed Space.

Weft Insertion System	Both Side Flexible Band Rapier System
No. of Weft Colours	Up to 8 Colours
Weft Detection	By Piezo Electric Slide Sensor
Shedding	a) Positive Tappet b) Dobby c) Jacquard
Cloth Roll dia.	300 mm (Max.)
Warp Yarn Detection	6 Raw Electrical Type

Weft Selection	At Will By Card System
Weft Feed	Off Reels, Spindles Or Weft Feeder.
Selvedge	Positionve Leno False Selvedge Device
Letting Off Motion	Attached Semi Positive Type
Beam Pipe dia.	550 - 600 mm

G. Staubli AUTOMATIC DRAWING-IN INSTALLATIONS:



Salient Features:

The DELTA 200 is a high-performance drawing-in installation. It is used wherever high production performance, a wide field of applications, and maximum flexibility are required. The DELTA 200 draws-in warp yarns directly from the warp beam with 1 or 2 sheets, and optionally up to 4 sheets.

The DELTA 110/100 drawing-in installations are designed for weaving mills with medium drawing-in requirements. While the DELTA 100 is specially designed for filament weavers and draws-in the warps threads into healds and reed only, the DELTA 110 also handles drop wires and is a universal installation. Furthermore, a module is available that is specially designed for drawing-in course yarns. Drawing-in takes place directly from the warp beam with 1 warp sheet, or optionally with 2 warp sheets.

STAUBLI WARP TYING INSTALLATIONS:



Salient Features:

Efficiency:

Warp preparation on the TPF tying frame is fast and comfortably with reliable knot formation even at 600 knots per minute the warp threads are drawn through the weaving harness in a perfect manner.

Flexibility:

Practically all staple fiber and filament yarns can be tied without extensive adjustments in a range of 0,8-500 tex / Nm 2-1250 / Ne 1,2-740 using single or double knots.

Quality:

The unique, patented electronic double thread detection of the TOPMATIC PC operates in warps with or without lease. The considerable reduction in double threads and redirected warp threads lead to an increased efficiency of the weaving machine. The repeat programming, the tying quality with colored warps increases considerably.

H. PICANOL Airjet Weaving Machine(OMINIplus-2-P 340):



Salient Features:

- Sumo main motor with direct machine drive
- High-performance filling insertion, for weaving more with less air

- Split frame for style change in less than 30 minutes
- Accurate, user-friendly machine setting using the interactive display, Ethernet connection, USB memory stick or key tag interfaces
- Low-built construction and many ergonomic features
- Up to 8 colours or yarn types
- Reed widths from 190 to 400 cm
- Fast warp gaiting and cloth doffing, no tools required

1) **PICANOL Airjet Weaving Machine (Olympica-2-P- 190):**



Salient Features:

- 1-2 colours or yarn types
- Electronic control
- High-performance filling insertion
- Low built, ergonomic structure
- Electronic Take-Up and Let-Off
- Reed width of 190 and 230 cm
- Sumo direct drive main motor
- Weft insertion rate of 1800-2000 mt./min
- Main nozzle/sub nozzle modified to save Power
- Programmable weft tensioner, air tucker, knot extractor
- Rotary leno system

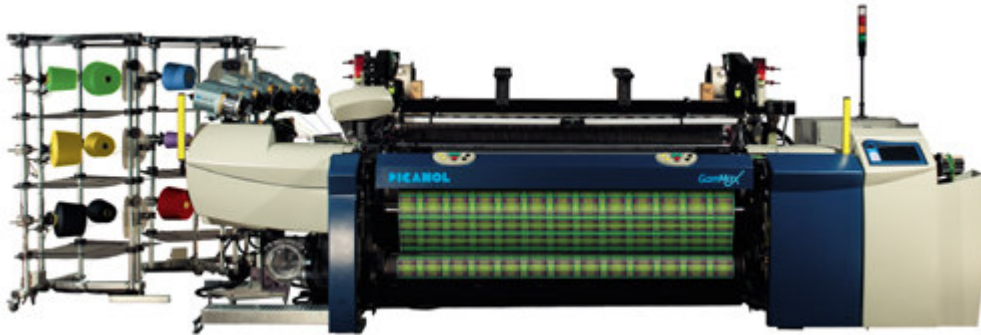
2) **PICANOL Terry Plus:**



Salient Features:

- Sumo main motor with direct machine drive
- High-performance filling insertion, for weaving more with less air
- Digital setting and fine-tuning of the complete insertion cycle
- Low-built construction and many ergonomic features
- Up to 8 colours or yarn types
- Fast warp gaiting and cloth doffing, no tools required
- Motor for pile height control

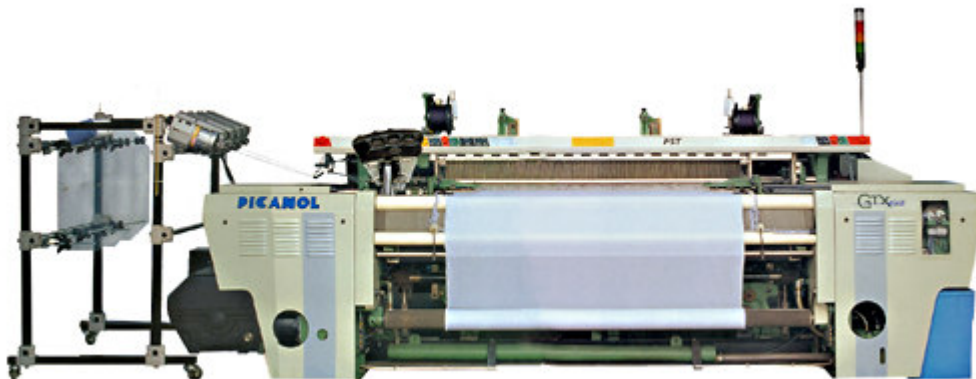
3) PICANOL Rapier (Gam MAX):



Salient Features:

- Optimised insertion cycle for unequalled industrial speeds
- Insertion with up to 12 colours
- Reed width of 190, 210, 220, 230, 250, 300, 320, 340, 360, 380 cm
- Accurate, user-friendly machine settings using the interactive display, Ethernet connection, USB memory stick or key tag interface
- Sumo main motor with direct machine drive is standard
- Electronic setting of shed crossing
- ELSY selvage motions

4) PICANOL Rapier (GTXplus-4-R-190):

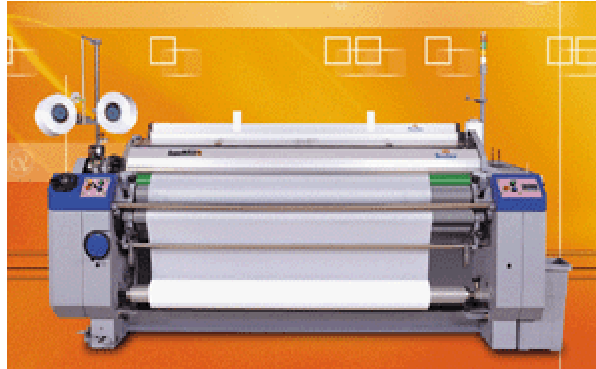


Salient Features:

- Optimised insertion cycle for unequalled industrial speeds
- Insertion with up to 12 colours

- Accurate, user-friendly machine settings using the interactive display, Ethernet connection, USB memory stick or key tag interface
- Sumo main motor with direct machine drive is standard
- Electronic setting of shed crossing
- Simple and versatile weaving machine
- Weft insertion rate – 900 Mt./min or 450 rpm
- Capable of weaving wide range of fabrics, fancy fabrics and technical textiles
- Width available – 190, 220 and 240 cm

I. STX- Textec, koria waterjet loom:



Salient Features:

i) Model TW 4000 - SuperMAX II (2 Nozzle Type)

- Width 150, 170, 180, 190, 210, 230, 250, 260 cms.
- Speed 700 r.p.m
- Shedding: Crank – type Plain Shedding, Dobby Shedding for 16 Shafts
- Most rigid body and reinforced driving part within high-speed operation.
- Improved strength and durability
- Electronic/Mechanical Let Off
- Electronic/Mechanical Take Off
- Automatic Stop Mark preventive Device
- Central Lubricating System
- Automatic Twin Pumping Device for better insertion of two kinds of weft with different properties
- Section Drying Device with Blower
- Consisting Two Nozzles with Four Pieces Weft Stand

ii) Model TW 4000 - SuperMAX II (1 Nozzle Type)

Same as SuperMAX II - 2 Nozzles Type except single Nozzles with Two Pieces of Weft Stand Device

J. Dornier Rapier Weaving Machine- Model PTS 8J

Salient Features:

- Width 170 - 430 cms.
- Weft colour – 16 colors.
- Shedding- Stabuli Jacquard machine with up to 20,000 hooks.
- Suitable for Polyester, Silk and Metal Yarn.
- Electronic cloth take-up
- Electronic warp let-off
- Filling insertion – 1200 mts/min.

K. Dornier Air Jet Weaving Machine- Model AWSE 4/E

Salient Features:

- Width 150 - 540 cms.
- Weft colour up to 8 colors
- Shedding- Stabuli cam motion type 1761/ dobby up to 16 shafts/ 10,000 hooks jacqard.
- Suitable for Denim (Slub yarn, OE cotton yarn, Lycra), suiting, shirting/ furnishing.
- Electronic cloth take-up
- Electronic warp let-off
- Positive weft clamp PWC
- Compact servo valve and servo controls
- Filling insertion rate 2650 mts/min (multiple insertion possible)

L. SMITH Terry Weaving Machine (G6300F):



Salient Features:

With seven different weaving widths, from 220 to 360 cm, the G6300 F is ideal for multi-panel weaving of bulk terry or terry towels. The ground and pile warps each have an electronically controlled warp let-off system. The high-precision pile warp let-off system ensures uniform pile formation from the full to the woven-out warp beam. The overhead pile warp beam, up to 1250 mm in diameter, offers optimal capacity. When weaving matched goods, the length of towels and borders is controlled on the basis of the required number of picks.

The various weft densities are set at the terminal and continuously monitored electronically *with a maximum weft insertion rate of up to 1'500 m/min.*

Pile formation by sley control

- loose pick distance up to 24 mm
- pile height change while machine is running
- colour selector with up to eight weft colours
- almost limitless patterning options
- easy operation

M. PROMOTECH Weaving Machine (K88):



Salient Features:

Nominal widths:

1700-1900-2100-2200-2300-2600-2800-3000-3200-3400-3600-3800 mm

Width reduction:

600 mm standard, 1000 mm on request

Performance:

Up to 550 picks per minute

Up to more than 1200 m/min of weft inserted

Fabric produced:

Fabrics with natural, artificial, synthetic or blended yarns; weights from 15 to 800 g/m²

Yarn handled:

Spun yarns from 2 Nm to 200 Nm

Filament yarns from 3000 dTex to 10 dTex

Weft density:

Standard: from 4 to 84 picks/cm.

On request: from 1 to 20 wefts/cm or from 8 to 150 picks/cm.
Different programmed pick densities in the pattern.

Filling insertion:

TRANSFER EK system with rapiers already mounted on flexible ribbons, guided on both sides by a race consisting of hook guide elements.

Machine versions:

Single beams or twin beams with diameters up to 1000 mm.
Quick beam release.

Number of colours:

4 - 8 colours in any order.

Weft feed:

Separate-coil electronic weft feeders.

Sley:

Driven by two (narrow looms) or three (wide looms) positive coupled cam units.

Shed geometry:

Symmetrical, small size.

Warp let-off:

Motorized positive let-off with electronic control; synchronised with fabric regulator.

Fabric regulator:

Motorized positive regulator with electronic control; synchronised with warp let-off.

Shed formation:

Stäubli electronic rotary dobby with 12 frames.
Electronic rotary dobby, Fimtextile RD860S - Stäubli 2668 (max. 20 frames)
Mechanical or electronic Jacquard with cardan drive.

Pick finding:

Motorized multi-purpose device with electronic control, programmable to suit requirements.

Selvedges:

Leno device binding with 2 or 4 ends.
Heat-sealed for synthetic yarns.
Lateral and central tuck-in devices.
False selvedges and binding ends controlled by a separate device.

Weft control:

High sensitivity piezo-electric detector for anti-double weft control

Warp control:

Electric warp stop motions with 6 or 8 rows.
Fast broken thread identification devices available on request

Fabric cloth roller:

On quick release fabric roller up to 500 mm in diameter.
External batching unit on request.

Lubrication:

Ribbon drive unit and sley control cam devices with pressure lubrication.
Other devices in oil bath.

Main drive:

Three-phase motor, nominal 6.5 kW. Electromagnetic brake/clutch unit.

N. Two-For-One Twisters & Cop Winders(For Synthetics):1) **Arun TFOTs****Salient Features:****TECHNICAL SPECIFICATION**

TYPE	LT	HT
NO. OF SPINDLE	256 TO 320	256 TO 320
FRAME	DOUBLE DECK ON BOTH SIDES	DOUBLE DECK ON BOTH SIDES
NO. OF SPINDLE PER SECTION	32	32
SPINDLE POT	90 mm. DIA.	90 mm. DIA.
SPINDLE PITCH	225 mm	225 mm
WORKING SPEED	9000 TO 16000 R. P. M.	9000 TO 16000 R. P. M.
TWIST RANGE	250 TO 2000 T.P.M.	400 TO 4000 T.P.M.
FEED PACKAGE	110mm. DIA. Max. ON 270mm TUBE LENGTH	110mm. DIA. Max. ON 270mm TUBE LENGTH
TAKE-UP PACKAGE	TAPERED CHEESE ON 175mm TUBE LENGTH	PARELLAL ON 160 X 140mm. FLANGE BOBBIN
TENSION DEVICE	BALL TYPE TENSIONER	BALL TYPE TENSIONER
TAKE-UP TENSION	ADJUSTABLE OVER FEED ROLLERS	ADJUSTABLE OVER FEED ROLLERS
SPINDLE DRIVE	ENDLESS BELT	ENDLESS BELT
DIRECTION OF TWIST	'S' OR 'Z' TWIST CHANGEBLE	'S' OR 'Z' TWIST CHANGEBLE
MAX. YARN SPEED	45 Mts/Min.	45 Mts/Min.
TRAVERSE SYSTEM	CENTRALISED TAPER	PARELLAL
TRAVERSE LENGTH	160 mm. Max.	160 mm. Max.
POWER REQUIREMENTS	7.5 H.P. X 2 MOTORS	7.5 H.P. X 2 MOTORS

2) Arun Cop-Winder (Sarvo):

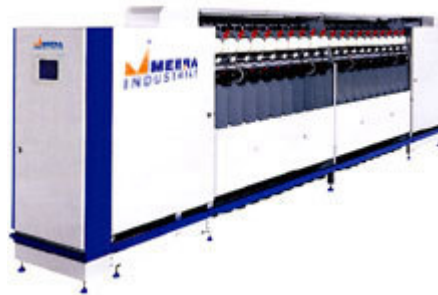


Salient Features:

TECHNICAL SPECIFICATION

NO.OF SPINDLES	60 -72 - 84 - 96 - 108
FRAME	SINGLE DECK - DOUBLE SIDED
COP SIZE	270 MM.
MAX YARN WEIGHT	900 GMS.
YARN WINDING SPEED	300 MTS/MIN - 700 MTS/MIN
CONSTANT YARN SPEED DEVICE	INVERTER BASED TECHNOLOGY
TRAVERSE MOTION	BALL SCREW SYSTEM
CONTROL PANEL	ELECTRONIC PROGRAMMABLE LOGICCONTROLLER
DRIVING DEVICE	ENDLESS BELT
OILING DEVICE	OPTIONAL

3) Meera TFO:



Salient Features:

Technical Specifications

TYPE	Double side and double deck
NO.OF SPINDLES	352, 384, 416
TWIST RANGE	Standard 137-2,006 TPM (3.48-50.95 TPI)
TAKE UP PACKAGE	Diameter 254 mm,width 152 mm
SPINDLE PITCH	225mm

SPINDLE SPEED	15,000 RPM
SUPPLY YARN	Dia. 110mm width 152mm (6")
LEASE ANGLE	12"-24"
TWIST DIRECTION	"S" & "Z" changeable
SUPPLY PACKAGE STABILIZATION	Magnet system
STARTING SYSTEM	Slow start with frequency AC drive
TENSION DEVICE	Capsule type
SPINDLE DEVICE	Tangential belt

4) Meera Cop Winder (Sarvo):



Salient Features:

Technical Specifications

Frame	Single deck both side
Supply package	Cheese of diameter 450 mm or DT cops
Take up package	42 mm or 36 mm dia. pirn / cop of length 240 to 320 mm, Bottle/ Bobbin
Yarn speed	300 to 700 m/min. constant
Splindle motor	3.70 KW / 5 HP 3 Phase 415V/380V
Tension device	V-type Knob Controlled Tension
Parameter setting	Denier, Yarn type, Yarn speed, Yarn weight , Angle, Yarn pitch, Low point, Stroke length, Winding type
Control device	PLC system with Servo motor driver
Winding type	Warp, Filling, Wondering, Compound, Bottle, Bobbin
Traverse device	Servo Motor with Ball Screw
Speed control	Inverter Controlled Spindle and Traverse Motor
Splindles braking	Individual Spindle Brake

O. Indigenous Rapier Weaving Machines

1) Himson Rapier Weaving Machine – Model – Wonder

Salient Features:

- Speed : Upto 250 r.p.m
- Nominal Working : 75"
- Shedding (Standard) : Tappets
- Shedding (Optional) : Dobby/Jacquard/Cam Motion
- Reed Motion : Cam Driven (one side Gear Box)
- Rapier Driven Motion : Double band Flexible
- Let-off Motion : Positive with Auto Control
- Take up Motion : Continuous
- Weft Selection : Upto 8 Colour
- Weft Selection Mode : Programmable with Micro Processor control
- Weft detection : Electronically (Slide sensor)
- Warp Stop Motion : 6 Row Electro Mechanical
- Selvedges : Leno Selvedge
- Installed Power : 3 HP 3 Ph. Electro Magnetic Brake motor

2) Himson Rapier Weaving Machine – Model – Winner XLT PLUS

Salient Features:

- Speed : Upto 250 r.p.m
- Nominal Working : 150, 190, 230 cms
- Shedding (Standard) : Tappets
- Sheeding (Optional) : Dobby/Jacquard/Cam Motion
- Reed Motion : Crank Fold Type
- Rapier Driven Motion : Double band Flexible
- Let-off Motion : Semi-Positive with Auto Control
- Pile Beam Let Off : Semi-Positive with Auto Control
- Take up Motion : Pickles Type
- Pile Height : 2 – 10 mm
- Weft Selection : Up to 6 Colour for Jacquard shedding and upto 8 Colour programmable for doobby shedding
- Weft Selection : Mode Mechanical
- Weft detection : Electronically (Slide sensor)
- Warp Stop Motion : 6 Row Electro Mechanical
- Selvedges : Leno Selvedge
- Installed Power : 2 HP 3 Ph. Electro Magnetic Brake motor

3) Himson Rapier Weaving Machine – Model – VECTRA

Salient Features:

- Speed : Upto 400 r.p.m
- Nominal Working : 170, 190, 220 cms
- Shedding (Standard) : Dobby
- Shedding (Optional) : Jacquard/Cam Motion
- Reed Motion : Conjugated Cam Driven
- Rapier Driven Motion : Double band Flexible
- Let-off Motion : Positive with Auto Control/Electronic optional
- Take up Motion : Continuous
- Weft Selection : Upto 8 Colour
- Weft Colour Selection : Programmable with Micro Processor control
- Weft detection device : Electronically (Slide sensor)
- Warp Stop Motion : 6 Row Electro Mechanical
- Weft Feeding : By weft accumulators
- Selvages : Leno Selvedge
- Installed Power : 3 HP 3 Ph. Electro Magnetic Brake motor

4) Alidhra Rapier Weaving Machine – Model – AWT 250

Salient Features:

- Speed : 500 Mtrs. Per minutes (max.)
- Width : 150, 160,170, 180, 190 cms
- Shedding : Cam Motion/Dobby/Jacquard
- Weft Selection : 6 - 8 Colour/pick & Pick Selection by Micro Processor
- Central Lubrication System
- Slide Sensor Weft Control/Brake System
- Optical Type (or PinDropper optional)Warp Control/Brake System
- High Durability, Productivity, Quality with low vibration

5) Alidhra Rapier Weaving Machine – Model – R 600

Salient Features:

- Speed : 550 Mtrs. Per minutes (max.)
- Width : 160,180, 200 cms
- Shedding : Positive Cam Motion/Rotary Dobby/Jacquard
- Weft Selection : 2,4,6or 8 Colour Pick at will by Micro Processor
- Electronic Let Off by Servo Motor/Positive Micro Processor controller
- Mechanical Take up
- Low Power consumption, maintenance, operation cost, less space requirements
- Suitable for wide range of fabrics

6. S.K.Overseas Computerized Narrow Fabric Weaving Machine.

Salient Features:

- High Quality machine parts for durability, long life service with low depreciation rate.
- Own lubricating system for easy and low maintenance & Service
- Easy for operation to obtain high efficiency, productivity and profit.
- Mechanism with precision and stability. Separation types adopted for weft feeding and binder thread.
- Easy for removal and assembling
- With many patented transmission parts for excellent quality.
- Weaving shed are fixed and separated by means of reinforced nylon to stabilize front shuttle opening and enhance weaving quality.
- Ann rubber feeding device to extend the weaving levels
- Direct edit the pattern at controller on the machine
- 3000 weft per area can be punched on the controller.