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**PP/HDPE HIGH SPEED FLAT YARN EXTRUSION LINE**

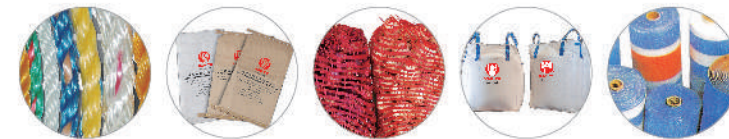
FOR WOVEN BAG, CEMENT BAG, TARPULIN, JUMBO BAG, GEO TEXTILE, ROPE INDUSTRIES

**CIRCULAR LOOM**

FOUR, SIX, EIGHT & TWELVE SHUTTLES CIRCULAR LOOM

**WOVEN BAG LAMINATING EQUIPMENT**

TWO LAYERS CO-EXTRUSION FILM BLOWING MACHINE  
PP WOVEN TUBULAR FABRIC INNER LINER  
INSIDE LAMINATION MACHINE  
OUTSIDE LAMINATION MACHINE  
BOPP LAMINATION MACHINE



CE ISO 9001

**WOVEN BAG PRINTING MACHINE**

ROLL TO ROLL FLEXOGRAPHIC PRINTING MACHINE  
ONE SIDE MANUAL FEEDING PRINTING MACHINE  
JUMBO BAG PRINTING MACHINE

**WOVEN BAG CONVERSION EQUIPMENT**

AUTO CUTTING & SEWING MACHINE  
AUTO GUSSETING, CUTTING & SEWING MACHINE  
VALVE BAG MAKING MACHINE  
ROLL TO ROLL TWISTING & GUSSETING MACHINE  
JUMBO BAG HEAT CUTTING MACHINE WITH HEAT PUNCHING

**PLASTIC RECYCLING PLANT**

FOR RECYCLING PP WOVEN BAG & PE LINER SCRAPS



[www.hao-yu.com.tw](http://www.hao-yu.com.tw)



**HAO YU**

Since 1980

**WHOLE PLANT EQUIPMENT**

**FOR WOVEN BAGS SOLUTION**

MACHINERY FOR PP / HDPE WOVEN BAG INDUSTRIES



# HAO YU

Is a special and professional manufacturer of PP/HDPE woven bag machinery and whole plant equipment for plastic industry. Since its establishment in 1980, Hao Yu has been dedicated to the research and development of high performance machinery. Our dedication to continuous research and development is the reason for the excellence of Hao Yu machines. Our objective is to enhance our present machinery and develop new models that improve the efficiency, product quality, energy saving and profitability for our customers.

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**Superior Machines  
Excellent Service  
Outstanding Partnership**



**Golden Dragon Award**  
for Machinery  
Innovation

**Award**  
for Excellence, Design and  
Innovation 2008

**Golden Dragon Award**  
for Machinery  
Innovation



**CE ISO 9001**

Since year 2000 Hao Yu developed the new processing technology of Twin Screws PET Strapping Band Extrusion Line, Twin Screws Pelletizer Plant and turn-key project solution. By our years of researching & development experience, we could provide high quality products making technology and offer fruitful working experience to back up our customers.

## HAO YU PRECISION MACHINERY INDUSTRY CO., LTD.

From the beginning, Hao Yu has focused its energy on the development of advanced PP/HDPE woven bag making machine, Twin Screws PET Strapping Band Extrusion Line, Twin Screws Pelletizer Plant and turn-key project incorporating the latest ideas in technology. Hao Yu machines have been supplied to over 480 whole plant equipment projects to 80 countries and have received the full satisfaction from our customers. This level of dependability is achieved through outstanding engineering efficiency, continuous research & development, the rigorous quality control, combined with our strong commitment to customer services. In addition, our engineering ability has earned us "The 3rd & 5th R. O. C. Golden Dragon Award", "1st prize of Taiwan new packaging machinery designing in 2008", etc... However we never stop improving our technology. The future and continuous success of Hao Yu depend upon further serving our customers with high quality machines that fully meet their requirements.



### JUMBO BAG

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ CIRCULAR WEAVING LOOM
- ▼ SINGLE OR DOUBLE SIDES LAMINATION MACHINE
- ▼ AUTO HEAT CUTTING MACHINE
- ▼ JUMBO BAG PRINTING MACHINE
- ▼ BELT KNITTING MACHINE
- ▼ SEWING MACHINE
- ▼ TREATMENT



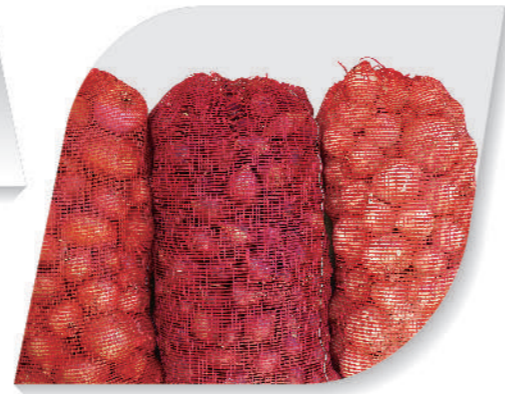
### LAMINATION WOVEN BAG

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ CIRCULAR WEAVING LOOM
- ▼ INSIDE LAMINATION MACHINE / OUTSIDE LAMINATION MACHINE
- ▼ LAMINATED WOVEN FABRIC ROLL
- ▼ PRINTING MACHINE
- ▼ AUTO CUTTING & SEWING MACHINE



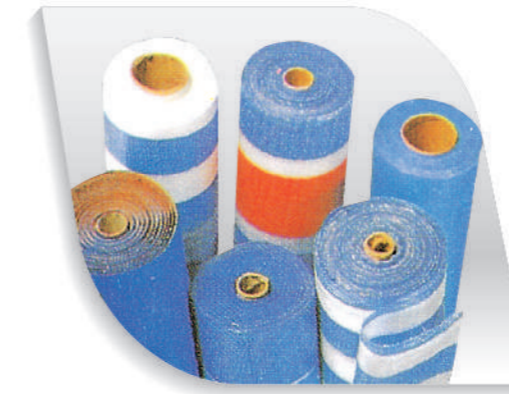
### WOVEN BAG

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ CIRCULAR WEAVING LOOM
- ▼ WOVEN FABRIC ROLL
- ▼ AUTO CUTTING & SEWING MACHINE
- ▼ PRINTING MACHINE



### ONION BAG

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ NET WOVEN CIRCULAR LOOM
- ▼ NET WEAVING FABRIC ROLL
- ▼ AUTO CUTTING & SEWING MACHINE
- ▼ HEMMING TREATMENT



### TARPAULIN

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ CIRCULAR WEAVING LOOM WITH CENTER UNFOLD TREATMENT
- ▼ SINGLE OR DOUBLE SIDES LAMINATION
- ▼ REWINDING
- ▼ HOT AIR WELDING
- ▼ DOUBLE HEAD HEM PACKING
- ▼ EYELETING



### CEMENT BAG

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ CIRCULAR WEAVING LOOM WITH CENTER UNFOLD TREATMENT
- ▼ SANDWICH LAMINATION
- ▼ CEMENT BAG FORMING MACHINE
- ▼ UNWINDER ROLL / PRINTING SYSTEM
- ▼ PREFORMING & PASTING / FORMING SYSTEM
- ▼ EXTRUDER / CUTTING & COUNTING
- ▼ CEMENT BAG CONVERSION LINE



### PP CEMENT BAG

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ CIRCULAR WEAVING LOOM
- ▼ WOVEN FABRIC ROLL
- ▼ SINGLE OR DOUBLE SIDES LAMINATION MACHINE
- ▼ PRINTING MACHINE
- ▼ ULTRASONIC CUTTING MACHINE
- ▼ BLOCK BOTTOM LAMINATED VALVE BAG CONVERSION LINE



### PP ROPE

- ▼ MIXER
- ▼ FLAT YARN EXTRUSION LINE
- ▼ FIBRILLATION
- ▼ TWINE / ROPE TWISTING

# PP/HDPE HIGH SPEED FLAT YARN EXTRUSION LINE

**HY7/SP-70HE    HY7/SP-100HE**  
**HY7/SP-80HE    HY7/SP-110HE**  
**HY7/SP-90HE    HY7/SP-120HE**



### Capacity from 100 to 520kgs/hour.

- ▶ The screw and barrel are manufactured from SCM-1 alloy steel, nitrogen treated and precision ground.
- ▶ Gears inside the gearbox are precision ground for noise-free running. Equipped with a water cooling system for cooling the oil of the gearbox.
- ▶ Built with auto loader and patent design material force feeding unit.
- ▶ Choice of AC or DC motor drive.
- ▶ Low energy consumption.



### ROTARY SLITTING BLADES

- ▶ Constructed with single row slitting blade for fast & easy replacement.
- ▶ The slitting width is adjustable.
- ▶ Full pneumatic operation for convenience.
- ▶ Fitted with edge trim auto - recycle unit.



### STRETCHING UNIT

- ▶ Two stages hot air circulation system ensures raffia tape proper stretched.
- ▶ Air flow volume is adjustable.
- ▶ Air flow orientation design.



### TAKE OFF UNIT

- ▶ Exclusive 2 independent driving motors provide raffia tape with superior quality.
- ▶ Static electricity elimination provided.
- ▶ Waste yarn collection box for reclaiming is provided.

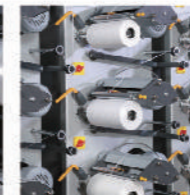


### OPTIONAL EQUIPMENT

- ▶ Touch screen interface.
- ▶ Chiller.
- ▶ Air conditioning unit for electrical cabinet.
- ▶ Static mixer unit.
- ▶ Gravimetric dosing system.
- ▶ Tape fibrillation device.
- ▶ 6 rows slitting blade unit available upon special request.
- ▶ Plastic melt pump.



Heavy duty type

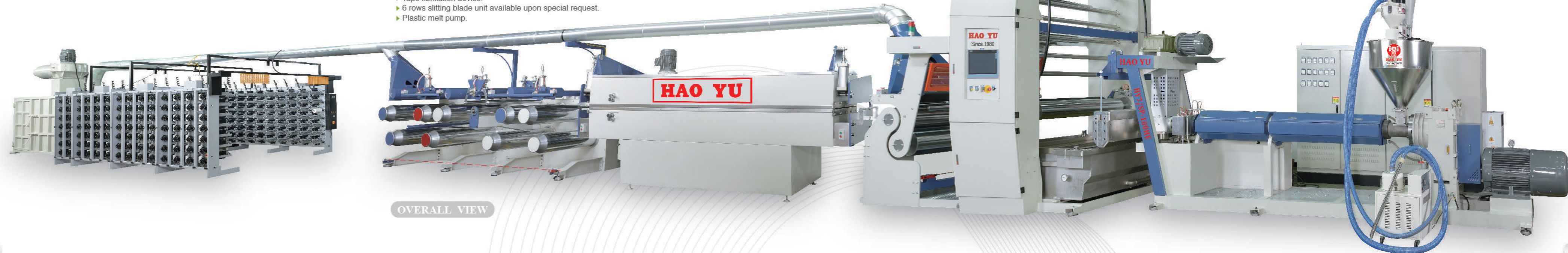


Magnetic disk tension control



Electronically controlled yarn tension

The extrusion machine is designed for producing PP/HDPE raffia tape. Capacity is 100-520 kg/hr, and the unit is equipped with a belt type screen filter changer and rotary type tape slitting unit for none-stop operation. The machine features low energy consumption, less down time and reduces production loss. The pressure rollers of the equipment are pneumatic controlled, and have one-step synchronize control electronic system. The machine can incorporate with European-made gearbox, T-die, melt pump, tape winder upon customer's special requirement.



OVERALL VIEW

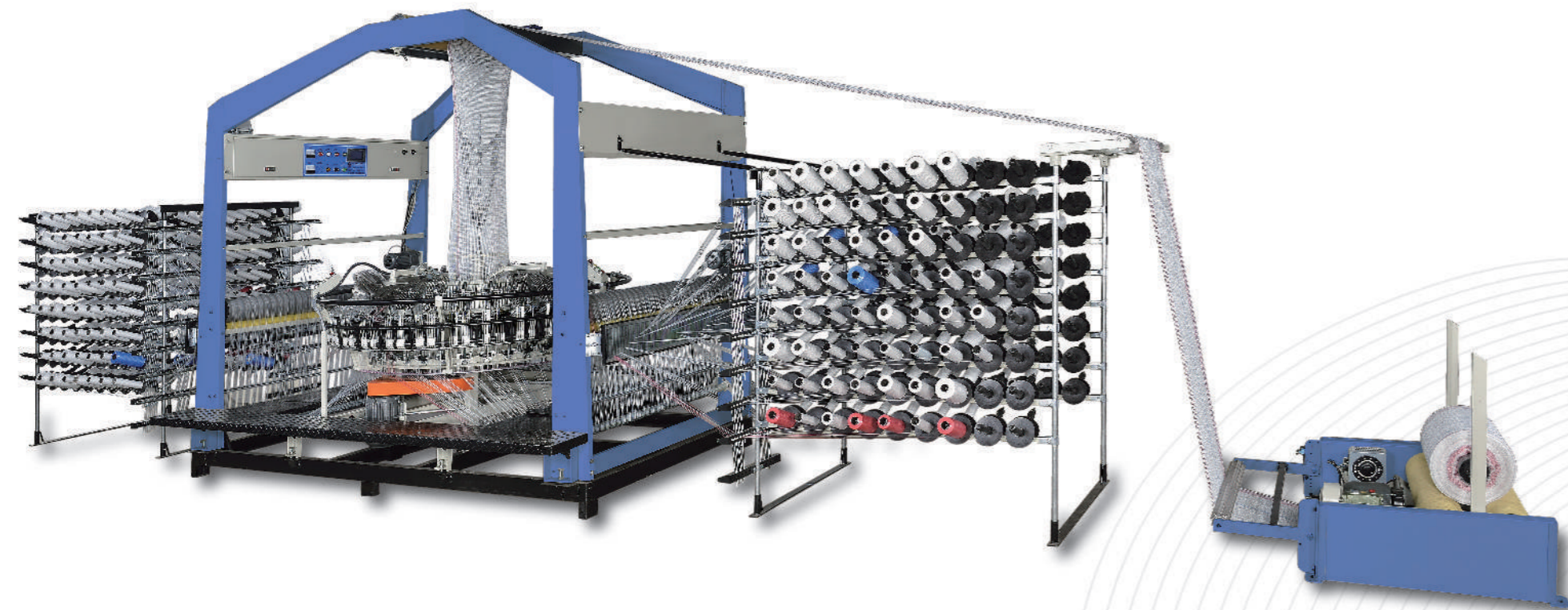
## HY7- m4SCLL

## HY7-m6SCL HY7-m6SCL1



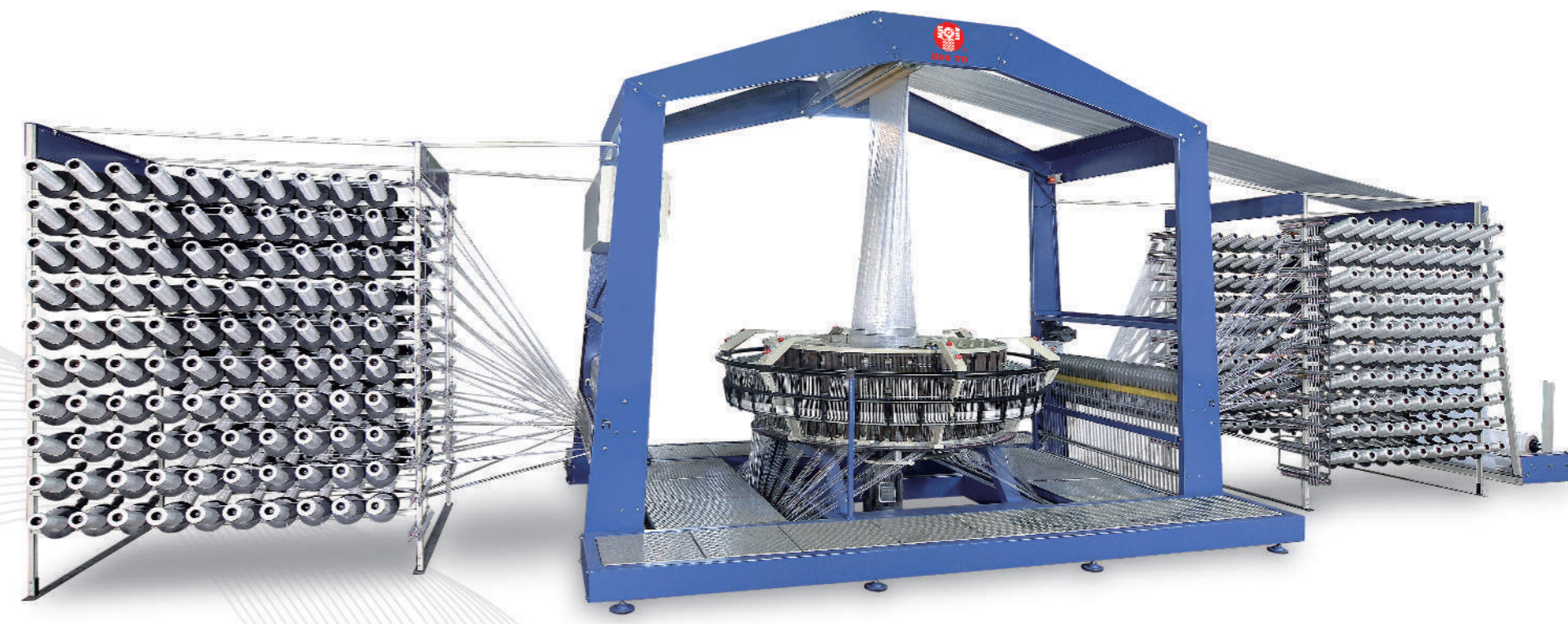
### Mini Four Shuttles Circular Leno Loom

The HY7-m4SCLL mini four shuttle leno loom is designed for tubular net weaving with PP and HDPE yarns. This is the latest and most unique weaving technology in the world, which features high production and energy-saving characteristics. This leno loom is also possible to be converted into a woven circular loom by applying modification kits. (from HY7-m4SCLL to HY7-m6SCL)



### Mini Six Shuttles Circular Loom

Designed for making tubular woven fabric cloth by PP/HDPE flat yarn and its working range is from 350 - 850mm and 800-1300mm. Equipped with inverter for main driving motor and weft bobbin sensor ensures fine quality woven products. Gusseting device, center unfold device, both sides heat slitting device, ultrasonic slitting device, warp infeed motor and Multi-language HMI control can be supplied as per customer requirement.



## HY7- m8SCL

## HY7-8CLA HY7-12CLA



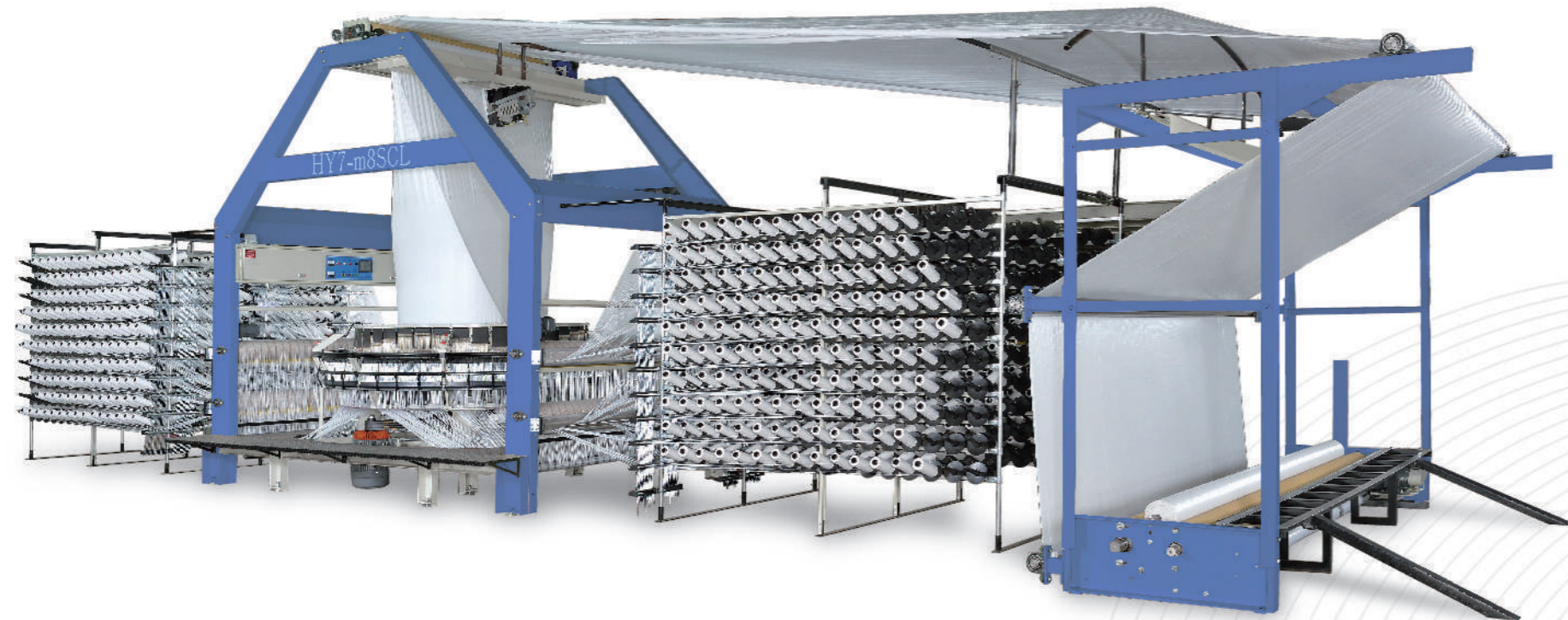
### Mini Eight Shuttles Circular Loom

Our circular looms are designed for weaving tubular woven fabric by using PP/HDPE flat yarn and the application mainly for tarpaulin, ground cover & jumbo bag (F.I.B.C.) industries. The working width of HY7-m8SCL is 145-200cm.

### Eight Shuttles Circular Loom / Twelve Shuttles Jumbo Circular Loom

Our looms can achieve weaving weight per square meter up to 600g by special order requirement. The weaving width capacity is from 180cm to 220cm and 265cm to 305cm(double lay flat width). The fabric strip of weft & warp position (size 5cm(W) x 30cm(L)) has high tenacity up to 500kgs (BY ASTM D5035-95) and the major application is for tarpaulin, ground cover, geotextile, jumbo bags.

Equipped with inverter for main driving motor and weft bobbin sensor for ensuring fine quality woven products. Gusseting device, center unfold device, both sides heat slitting device, ultrasonic slitting device, warp infeed motor and HMI control can be supplied as per customer's requirement.



### Geotextiles Application

Reinforcement for railways, roads, and bridge construction. Allows for the strengthening and protection of sloping terrain, river beds and waterfront areas.

## Two Layers Co-extrusion Film Blowing Machine

- ▼The patented extruder is compactly constructed. This design offers more power and higher operating speeds.
- ▼Direct drive die head.
- ▼Designed for blowing HDPE and heat melting glue resin.
- ▼CE & ISO 9001 certified.
- ▼The screw and barrel are machined from SACM-1 alloy steel, nitrated and hone finished.
- ▼Surface friction type winder. Accurate temperature control.



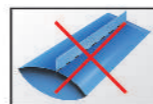
## PP Woven Tubular Fabric Inner Liner Inside Laminating Machine

Based on a tradition of continuous innovation, HAO YU has successfully developed a new inside lamination method (PP woven tubular fabric inner liner inside laminating machine). This machine has been patented in over 20 countries. It permits for direct processing of PP woven tubular fabric, ensuring split-free bag strength and high production capacity. It eliminates the problems caused by the need to stitch cut or center seal the woven tubular fabrics. This bag is specially designed for waterproof, humidity proof and non-slip storage. The working range 350mm-700mm and production speed from 20-50meter/minute.

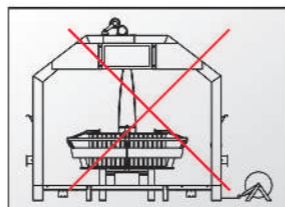
## HY7- IF50E



Tubular fabric is processed without the need for time consuming cutting and stitching, resulting in faster and more efficient production.



Traditional systems require stitching of fabric, reducing overall strength and lowering efficiency.



No require pre-insertion inner liner



## Outside Lamination Machine

- ▼Specially designed screw performs high mixing and high output extrusion with stable conveying conditions and excellent plastification.
- ▼Specially designed barrel with groove line on surface and forced type concentrated cooling system, highly efficient cooling function, make temperature control easier.
- ▼Adopts AC or DC drive for high transmission efficiency and energy saving. Internal deckle type T-die is used to reduce the occurrence of uneven thickness of the coated edge.
- ▼Steel cooling roller, surface hard chrome plated, internal design are double shell spiral baffle and single flow type. This offers uniform surface temperature transmission and better cooling efficiency.
- ▼Pressure roller is silicon rubber covered, and uses internal water cooling system. The hardness of the silicon rubber prevents laminated sheets from sticking to the roller.

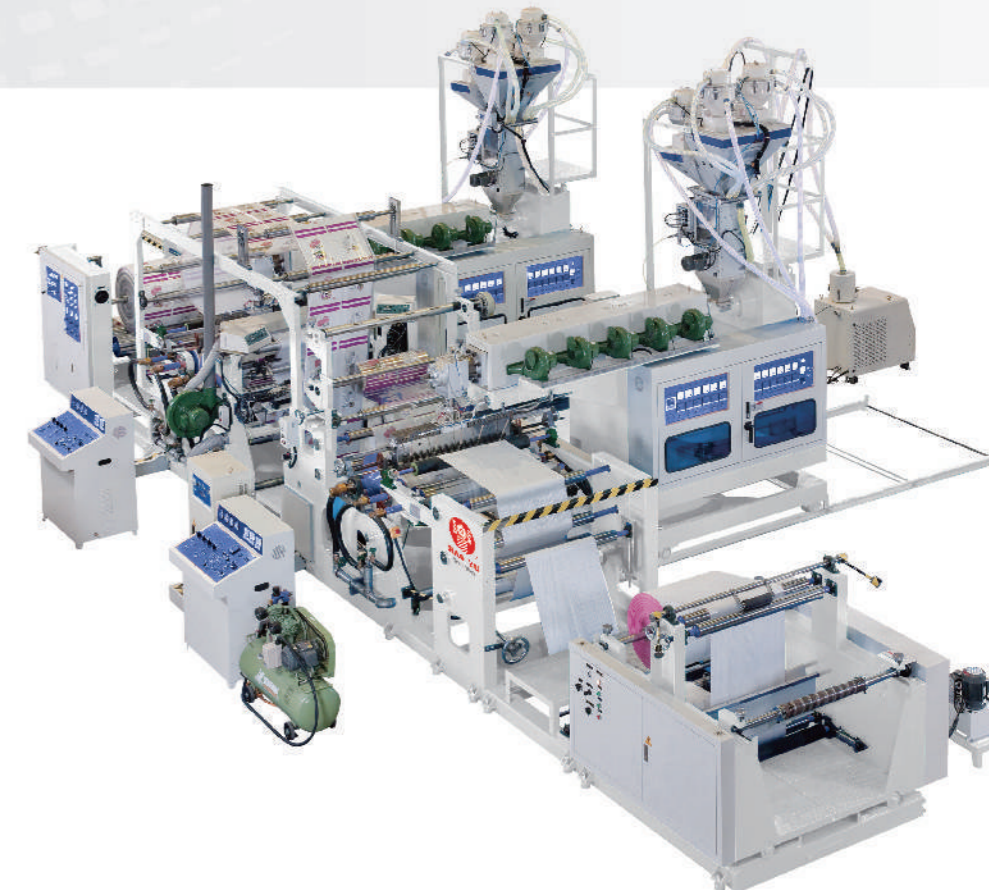


Applicable for Lamination of BOPP Film with PP Woven Bag.



HY7/LH-75D  
HY7/LH-90

HY7/LH-100  
HY7/LH-120



## Specifications

		Working Material	Kraft Paper,Woven Fabric, NON-WOVEN Fabric,BOPP (Spunbond)
Basic Specification	Resin	PP,LDPE	
	Laminating Thickness	0.01mm~0.06mm	
	Product Width	800mm~4000mm	
	Idle Speed	0 ~ 150m/min	
Production Speed Is Depended On Thickness, Material Property Etc.			
Optional Equipments	Turn Bar Device, Corona(Plastic Surface Treatment), Edge Trimming With Sensor Control, Exhaust Device For T-Die, Perforation Device		

## HY7- JH/FF-6080BNW-A

### Halftone Flexographic Printing Machine (Off-Line)

- ▼ Automatic tension control + magnetic brake on unwind and rewind.
- ▼ Non-stop semi-auto web-changing device.
- ▼ Electric control by using PLC with full color touch-screen type human machine interface (HMI).
- ▼ To use differential gear device (made in Japan) to adjust the registration with forward and backward adjustment by the electronic type push-button device .
- ▼ Main motor by using AC motor with inverter control and line speed controlled by harmony synchronous driving system.



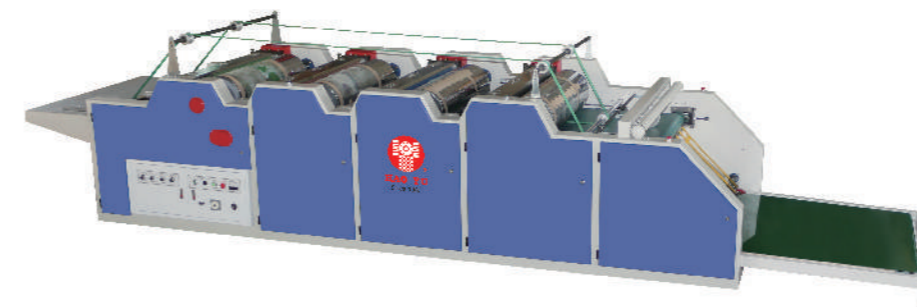
#### OFF-LINE SERIES

MODEL	PRINTING WIDTH	FILM WIDTH	REPEAT LENGTH	PRINTING SPEED
HY7-JH/FF-6080BNW-A	800 mm	820 mm	13" - 48"	20-120 m / min
HY7-JH/FF-8080BNW-A	800 mm	820 mm	13" - 48"	20-120 m / min

## HY7- 104

### One Side Manual Feeding Printing Machine

The machine is one side and piece-by-piece type printer. Each printing roller is equipped with an ink recycling system for saving ink. Each roller has a single color and this is a multi-color printing system. Printing speed is up to 40 pcs/min. Our printing machine is applicable up to 6 colors upon customers' requests.



## HY7- 206NRP

### Roll To Roll Flexographic Printing Machine

A whole new design - based on the previous model which had been produced over 10 years - presents our efforts for upgrade and improvement. To achieve a better performance, HY7-206NRP is equipped with gear boxes on each printing station. These gear boxes feature 360 degree online printing registration during machine running. An overhead drying oven is employed. Reel to reel printing is the most efficient way for the PP woven bag printing (especially for double side printing). The HY7-206NRP is capable of performing 2-12 color printing and productivity up to 120 m/min, decreasing the printing cost to a minimum. All the aforementioned characteristics make such printing machine the best choice among all the other competitors' . Roll to roll production is for loading printed and unprinted woven fabric without stopping the machine upon customer's special requests.

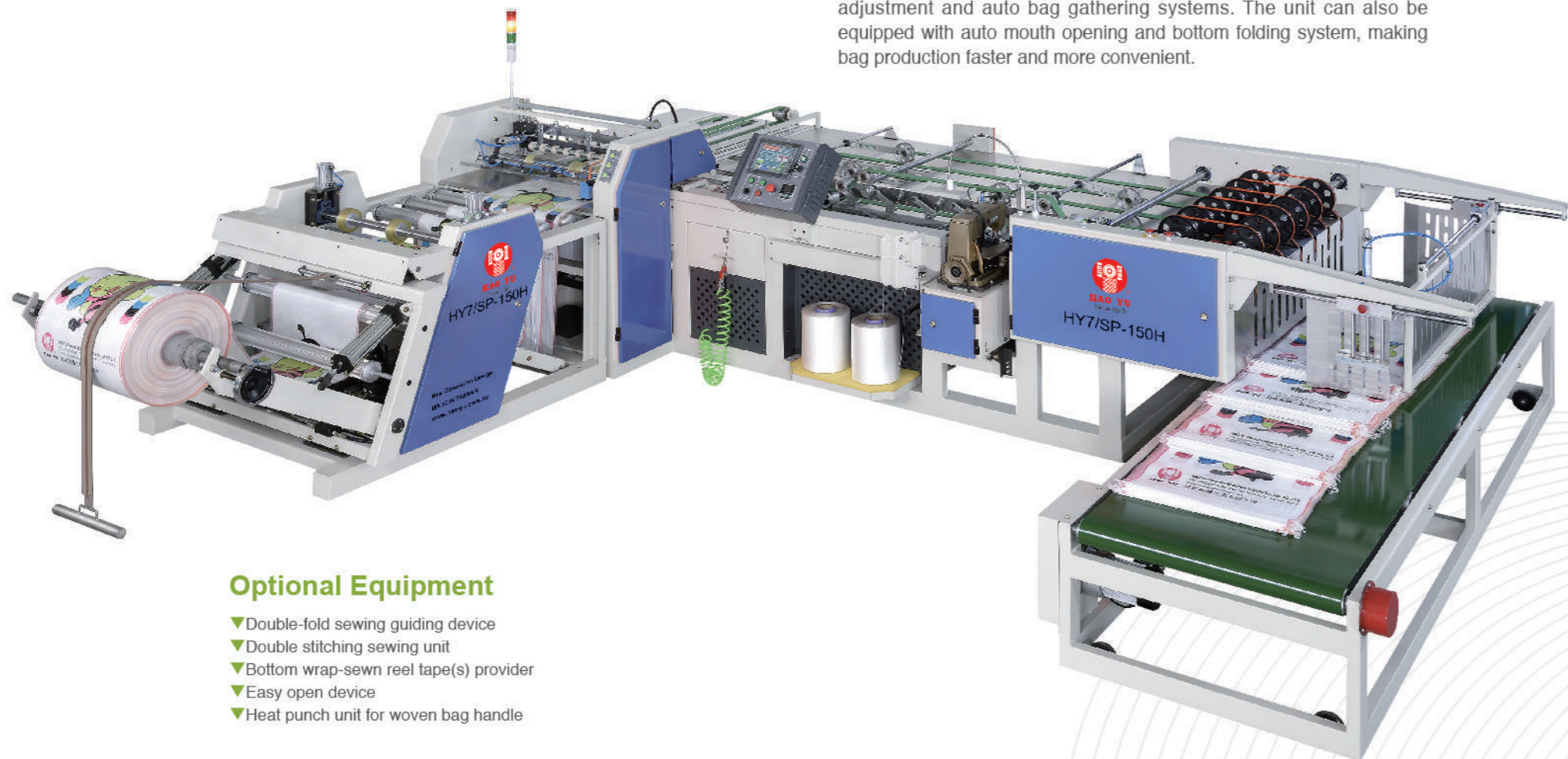




## HY7/SP-150H

### High Speed Auto Cutting-Sewing Machine

The HY7/SP-150H has a capacity of 30-45 bags/min, with length adjustment and auto bag gathering systems. The unit can also be equipped with auto mouth opening and bottom folding system, making bag production faster and more convenient.



#### Optional Equipment

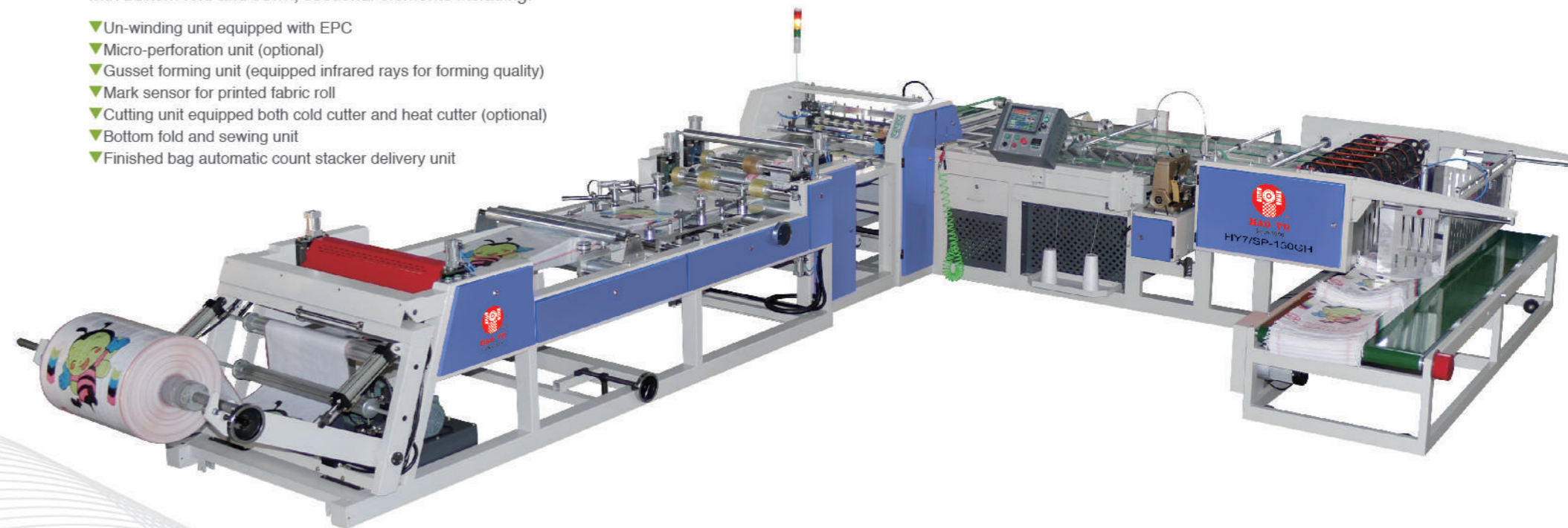
- ▼ Double-fold sewing guiding device
- ▼ Double stitching sewing unit
- ▼ Bottom wrap-sewn reel tape(s) provider
- ▼ Easy open device
- ▼ Heat punch unit for woven bag handle

## HY7/SP-150GH

### High Speed Auto Gusseting-Cutting-Sewing Machine

This Gusseting-Cutting-Sewing Machine is designed to flawlessly from side Gusset with bottom fold and sewn, sectional elements including:

- ▼ Un-winding unit equipped with EPC
- ▼ Micro-perforation unit (optional)
- ▼ Gusset forming unit (equipped infrared rays for forming quality)
- ▼ Mark sensor for printed fabric roll
- ▼ Cutting unit equipped both cold cutter and heat cutter (optional)
- ▼ Bottom fold and sewing unit
- ▼ Finished bag automatic count stacker delivery unit



#### Optional Equipment

- ▼ Double-fold sewing guide device
- ▼ Double stitching sewing unit
- ▼ Bottom wrap-sewn reel tape(s) provider
- ▼ Easy open device
- ▼ Heat punch unit for woven bag handle

#### Specifications

Processing Bag width	300-850 mm Applicable
Processing Bag Length	450-1400 mm Applicable
Printing Output	32-42 bags / minute

#### Processing Size of the Gusset Bag

	Gusset Device -Standard-	Gusset Device -For Small Bags-
Bag width before gusset	560-700 mm	480-620 mm
Bag width after gusset	400-600 mm	380-500 mm
Gusset depth	50-90 mm	50-90 mm

(This model equips only one unit of gusset device, an extra one is optional)

# WOVEN BAG CONVERSION EQUIPMENT



### Roll to Roll Twisting & Gusseting Machine

- ▼ Smooth reel to reel method with high capacity of maximum 60 meters per minute.
- ▼ Easy operation for twisting and gusseting by turning the printing area to central position of gusseted area.
- ▼ Various gusseting depth for different bag sizes are available and adjustable.
- ▼ Ideal design for laminated woven bag and BOPP woven bag.

### Specifications

Processing Bag width	300-680 mm
Gusseting Fold-In Depth	40-90 mm Adjustable

### Processing Size of the Gusseted Bag

	Large Bag Gusseting Size	Small Bag Gusseting Size
Bag width before gusseting	430-650 mm	290-430 mm
Bag width after gusseting	360-580 mm	220-360 mm

**HY7-TG700**

# WOVEN BAG RECYCLE EQUIPMENT



**HY7-A25  
HY7-A30**

### Power Crusher

This crusher is specially designed for crushing PP/HDPE film, dirty woven bags, used woven bags, PP/HDPE flat yarn to be converted into pellets.

**HY7/SM-90SP  
HY7/SM-100SP  
HY7/SM-120SP**

This equipment is specially designed for recycling PP/HDPE woven bags, BOPP film waste.

Model	Screw Conveyor		Main Extruder		Sub-extruder		Pellet Cutter	Blower
	Power	Temp. Control	Heating Capacity	Production Capacity	Power	Heating Capacity	Power	Power
HY7/SM-90SP	30 HP AC	5 zones	25 KW	80-120 kg/hr	VS 15HP	15 KW	3 HP	3 HP
HY7/SM-100SP	40 HP AC	6 zones	30 KW	120-160 kg/hr	VS 15HP	20 KW	3 HP	3 HP
HY7/SM-120SP	60 HP AC	7 zones	40 KW	220-250 kg/hr	VS 25HP	25 KW	5 HP	5 HP

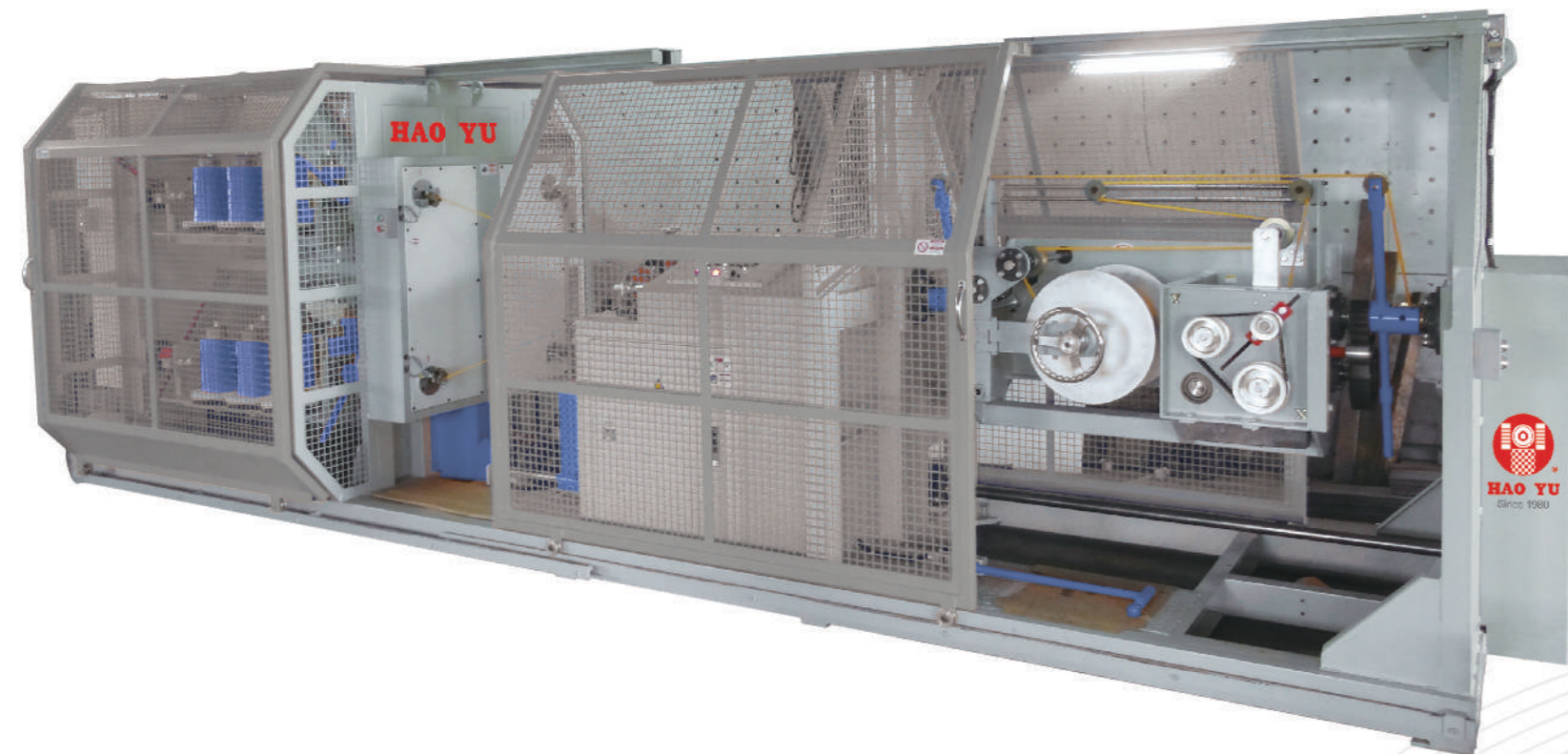
The above specifications and dimensions are for reference purpose only. These figures are subject to change without prior notice.

# ROPE MAKING MACHINE

HY7-CH1  
HY7-CH2  
HY7-CH3

# RING TYPE TWISTING MACHINE

HY7-T10  
HY7-T7



## High Speed Rope Making Machine

### Specification

Item	HY7-CH1	HY7-CH2	HY7-CH3
Rope range	Ø3-7mm	Ø6-13mm	Ø10-20mm
Rope twisting direction	S or Z	S or Z	S or Z



## High Speed Rope Twisting Machine

### Specification

Item	HY7-T10	HY7-T7
Spindle quantity	30 pcs	40 pcs
Spindle Axis	Ø22mm	Ø19mm
Rings Bore Height	Ø 254mm*38.1mm	Ø 178mm*25.4mm
Yarn Boxes Size Limit	Ø 220mm(O.D.)*345mm(H)* Ø 22mm(Center hole diameter)	Ø 152mm(O.D.)*345mm(H)* Ø 19mm(Center hole diameter)
Twisting Direction	S or Z	S or Z
Attach Yarn boxes	90 pcs	120 pcs
Denier (Max.)	35,000	15,000
Spindle Speed	1700R/Min , 0-75 kgs/per hour	2660R/Min , 0-37.5 kgs/per hour
Dimension of machine (L×W×H)	7m(L) × 1.6m(W) × 2.5m(H), excluding creel size	7.7m(L) × 1.6m(W) × 2.5m(H), excluding creel size



# TWINE REWINDER MACHINE



HY7-TN33

### General Performance

Item	Description and Quantity
Model	Without bobbins inside
Yarn meter	TN16A micro-computer yarn meter
Finish products	Weight: 100g, height 8cm, outside dia: 6cm
Yarn	Less than 3mm
Spindle speed	0~1400r.p.m.
No. of spindle	6 pc
Motor	1hp
Drive device	V-belt



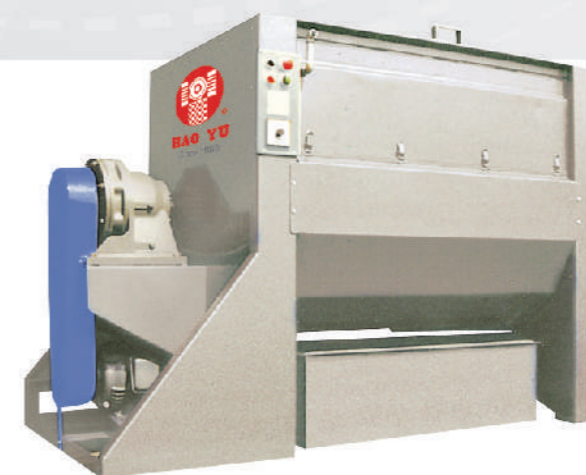
# AUXILIARIES



**HY7-20TS**  
**T.B. Type Hydraulic Baling Press**

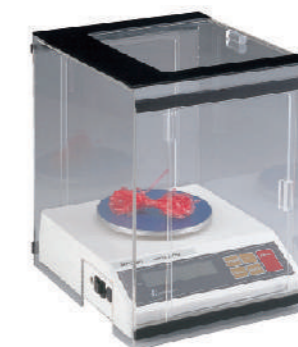
The HY7-20TS is a 30 ton press for packing and equipped with a carrier for feeding and delivering bags after manual packing. The unit is a vertical type hydraulic press. We also provide hydraulic baling Press up to 100 tons.

HY7-350 / HY7-500



### Mixer With Thermal Heating

- ▼ This unit is to mix the raw material for flat yarn extrusion line.
- ▼ Equipped with thermal heating design for drying function.
- ▼ Loading capacity with 300kg & 500kg.
- ▼ Larger or special loading capacity is available upon request.



**DT**  
**Electronic Balance**

The DT Electronic Balance accurately measures the weight (denier) of PP/HDPE flat yarn.

**GT-7010AEP**  
**Tensile Strength Tester**

The GT-7010AEP is specially designed for measuring the tensile strength of PP/HDPE flat yarn.

