

## Highlights of the machine

- 1) Specially designed for producing jumbo roll stretch film ( $\geq 60$  KGS/roll).
- 2) High speed design: up to 250 M/min (the maximum working speed could be as high as 160~210 M/min).
- 3) High production capacity: 440~480 KGS/H (depends on the film thickness)!
- 4) Easy operation (one man is enough to operate the machine).
- 5) Excellent production capacity and power consumption ratio: only 0.4 KWH/KG.
- 6) Equipped with automatic unloading and loading system for the jumbo rolls.

No.	Item	Description
1.	Model:	XHD-80/120/80-2400
2.	Power supply:	380 V/50 HZ/3 Phases
3.	Total Installation Power:	300 KW (for the machine only)
4.	Pneumatic Drive:	0.8 MPA
5.	Main Raw Material:	LLDPE, LDPE (few) & MLLDPE
6.	Thickness of Film:	12~50 microns (minimum thickness can be 8 microns)
7.	Width of the Useful Film:	2000 mm
8.	Film Layer Structure:	Three layers or five layers
9.	Designed Linear Speed:	250 M/Min
10.	Dimensions (L×W×H):	16.5×8.2×5 M (for reference only)
11.	Gross Weight:	20000 KGS (for reference only)

## II. Details of the machine

### ● Feeding system

- 1) 2 sets of 2.2 KW three phases automatic loaders and 1 set of 3.7 KW three phases automatic loader.
- 2) 3 sets of common hoppers for the resins and 1 set of separate hopper for the recycled flakes.

### ● Extruders (3 units, extruder A, B and C)

#### Extruder C (cling layer) and extruder A:

- 1) 1 set of JIANGSHENG brand 37 KW AC motor.
- 2) 1 set of SENLAN brand 37 KW variable frequency drive.
- 3) 1 set of coupling with rubber type element is used to connect the motor and the gear box.
- 4) 1 set of GUOMAO brand gear box specially designed for extruder. Model: 200#.
- 5) 1 set of 80 mm diameter 38CrMoAlA alloy screw with good nitrogen treatment. Effective screw L/D=30 D.
- 6) 1 set of 38CrMoAlA alloy barrel.

Heating system: ceramic band heaters.

Cooling system: by low noise fans (installed on barrel cover).

- 7) 1 set of automatic screen changer powered by hydraulic station. The screen/filter can be changed in a few seconds.

#### Extruder B (core layer) :

- 1) 1 set of JIANGSHENG brand 132 KW AC motor.
  - 2) 1 set of SENLAN brand 132 KW variable frequency drive.
  - 3) 1 set of coupling with rubber type element is used to connect the motor and the gear box.
  - 4) 1 set of GUOMAO brand gear box specially designed for extruder. Model: 330#.
-

- 5) 1 set of 120 mm diameter 38CrMoAlA alloy screw with good nitrogen treatment. Effective screw L/D=30 D.
- 6) 1 set of 38CrMoAlA alloy barrel.  
Heating system: ceramic band heaters.  
Cooling system: by low noise fans (installed on barrel cover).
- 7) 1 set of automatic screen changer powered by hydraulic station. The screen/filter can be changed in a few seconds.

● **Feed block**

- 1) 1 set of five layers feed block equipped with CBA runner block or CABAC runner block.

● **T-die**

- 1) JC-TIMES brand
- 2) Manual adjustment PE cling film T-die.
- 3) T-die width: 2400 mm.
- 4) Material: high quality mould steel.
- 5) Processing: quenching and tempering, grinding the inside surface;
- 6) Polished mirror surface and hard chrome plating treatment.
- 7) Designed heating power: around 40 KW.
- 8) T-die gap: around 0.9 mm.
- 9) The film width can be adjustable by using the external block.
- 10) The T-die holders are with design for easy maintenance and can be opened without detaching.

- Vacuum box

- 1) 1 set of double layer vacuum box is installed to extract the hot air around the T-die mouth and enhance the cooling effect.

- Film edge pinning device

- 1) 2 sets of electrostatic film edge pinning device with single dis-charging head are used to pin the film edges steadily.

- Cooling and form part:

- 1) 1 piece of 980 mm diameter frosted surface primary cooling roller.
- 2) 1 piece of 370 mm diameter shiny and smooth surface secondary cooling roller.
- 3) 1 set of silicone-coated roller is installed under the primary cooling roller for dust cleaning purpose.
- 4) Both rollers are equipped with universal copper water joints with flange type mounting and the water joints are connected by metal hoses for better cooling.
- 5) Synchronous wheels and belts are used as part of the transmission system for stable high speed production.
- 6) 1 set of light rails are installed under the part for easy frontward and backward movements (controlled by electricity power).

- Oscillation system

- 1) Equipped with 2 pieces of film expanding rollers.
- 2) Powered by motor.
- 3) All idle guide rollers are with hardened surface for high speed production.
- 4) A 20 cm wider aisle.

● **Jumbo roll winding part:**

- 1) 1 piece of 370 mm diameter take-up guide roller with shiny and smooth surface.
- 2) 1 piece of 550 mm diameter winding roller with frosted surface.
- 3) 2 pieces of rubber-coated roller to provide the pressure the film attached to the roller surface.
- 4) 1 set of hidden cutting saw.
- 5) ESD film coiling device and pneumatic drive are used to coil the first circle of film onto the paper cores.
- 6) The automatic film cutting and roll change are controlled by Mitsubishi PLC.
- 7) 3 pieces of 3" outer diameter key type air shafts.
- 8) Maximum weight of finished roll  $\geq$  60 KGS at film width 500 mm.
- 9) Synchronous wheels and belts are used as part of the transmission system for stable high speed production.

- **Automatic paper cores unloading and loading system for jumbo roll winder**

- 1) Automatic finished roll unloading (from the air shaft).
- 2) Automatic paper cores loading onto the air shafts.
- 3) Automatic spare air shaft loading.
- 4) No need to paste BOPP tape on the paper cores.
- 5) Automatic air shaft air inflation and deflation.
- 6) The system is suitable for paper cores with 3" inner diameter.
- 7) Formed of vehicle, paper cores loading plate and finished rolls reception desk.

- **Film edge and trim treatment:**

- 1) 1 set of XHD-182 film crusher.
- 2) 1 set of automatic re-feeder with separate hopper for the recycled flakes.
- 3) A new slitting system with two-working-station knife holders is installed. The operator can change the broken knives without causing any wastage.
- 4) All the film edges and trim are crushed, recycled and reused in the bigger extruder.

● Control system:

- 1) 1 set of electrical cabinet for temperature control and main motor inverters control.
- 2) Electrical parts brands: SKG temperature controllers, FOTEK SSRs and CHNT MCBs.
- 3) 1 set of operation table with speed controllers for the motors.
- 4) 1 set of take-up control box equipped with 10 inches JAPANESE PROFACE touch screen. All the movements of the automatic unloading and loading system can be controlled automatically or manually on the touch screen.
- 5) There are speed controllers which control the speeds of the main machine motors and the subsidiary machine motors