

**FILM EXTRUSION**

Three-Layer ABA Film Blowing Machine — 1000 mm

Three-layer ABA blown film for LDPE, HDPE and LLDPE — up to 120 kg/h, film 250 – 1,000 mm wide.

**120 kg/h**

MAX. OUTPUT

250 – 1,000 mm

FILM WIDTH

0.01 – 0.10 mm

FILM THICKNESS

52 kW

AVERAGE POWER

The extruder barrel and screw rods are made from quality nitrided alloy steel, giving high surface hardness and durable corrosion resistance. The purpose-designed screw delivers sound plasticizing quality, which increases production capacity. The machine blows LDPE, HDPE and LLDPE film, and is widely applied to packing bags for foodstuff and clothing, refuse sacks and vest bags.

The ABA three-layer configuration allows recycled material to be run in the central (B) layer while the outer (A) layers remain virgin resin, reducing raw material cost without any loss of surface finish or seal strength. Edge trim can be pelletised on a Miroplastic granulator and returned to the B layer.

TECHNICAL PARAMETERS

Model	SJ-55/ABA1000
Film width	250 – 1,000 mm
Film thickness	0.01 – 0.10 mm
Max. extrusion output	120 kg/h
Screw diameter	55 / 50 mm
Screw length (L/D)	30 : 1
Die size	100 / 200 mm
Driving motor	18.5 kW / 15 kW
Temperature control zones	3 / 3
Cylinder cooling	0.13 kW × 2
Take-up motor	1.5 kW
Average power consumption	52 kW

Energy per kg at max. output	0.43 kWh/kg
Winding speed	10 – 80 m/min
Rewinder (standard)	Single, automatic tension control
Machine weight	3,300 kg
Overall dimensions (L×W×H)	4.4 × 3.5 × 6.5 m

SCREW & BARREL — TAIWAN QUALITY

Material	38CrMoAlA nitrided alloy steel (screw and barrel)
Element analysis	C 0.35–0.42 · Si 0.20–0.45 · Mn 0.30–0.60 · S ≤0.035 · P ≤0.035 · Cr 1.35–1.65 · Al 0.70–1.10 · Ni ≤0.030 · Cu ≤0.030 · Mo 0.15–0.25
Hardness of tempering	HB 260 – 290
Depth of nitriding	0.4 – 0.7 mm
Hardness of surface	HV 900 – 1050
Roughness of surface	Ra 0.32
Linearity of screw	0.015 mm/m
Bimetal screw	Bimetal layer on screw thread — tungsten carbide
Bimetal layer hardness	HRC 58 – 62
Bimetal layer depth	2 – 3 mm
Bimetal layer elements	Fe, Ni, WC, B, C, Cu

MAIN COMPONENTS

- | | |
|---|----------------------------------|
| 1. Siemens motor | 5. Embossing roller |
| 2. Blower 3 kW, inverter controlled | 6. Rewinder, inverter controlled |
| 3. Fixed die head | 7. Ceramic band heaters |
| 4. Double-lip air ring, inverter controlled | 8. Pneumatic traction tower |

KEY FEATURES

- Main motor — Siemens brand, 1400 rpm, 380 V 3-phase, service life in excess of 10 years. Motor power can be changed to suit the customer's supply.
- Gearbox — hard-surface high quality gears, 10:1 reduction, oil lubricated, low noise and long life.
- Stainless steel extruder cover, separated for better heater control and lower power consumption, with the blower mounted separately on the cover.
- Fixed die head — Taiwan design high-speed head in #45 steel, surface treated for improved film clarity, oversized to increase machine output.
- Fast screen changer — no material leakage, quick filter change, reduces labour and downtime.
- Ceramic heaters — heat faster than stainless heaters, retain heat longer for lower power consumption, with approximately 5 years longer service life.
- Double vent air ring — two lips cool the film faster than a single lip, raising output; suitable for both HDPE and LDPE film.
- Omron digital temperature controller, accurate to 3 °C, with CHINT brand switches and breakers.
- LG inverter control on all motors — reduces power consumption and protects the motors; service life in excess of 10 years.
- Gusset traction parts to Taiwan design, easy to adjust; traction motor 1.5 kW at 1400 rpm with 7.5:1 gearbox under LG inverter control.
- Embossing roller with air-cylinder control — no manual adjustment; dot pitch 2 mm, and can be specified by the customer.
- Aluminium roller in place of banana roller — latest Taiwan technique for more even film.
- Single rewinder with automatic tension control, matching traction speed automatically under LG inverter control.

OPTIONAL

- Auto loader
- Corona treater
- Air compressor
- Thickness controller
- Rotary die head
- Fast screen changer

PHOTOGRAPHS



Twin extruders and die head



Die head and double-lip air ring



Extruder with ceramic heaters



Siemens main motors and gearboxes



Rewinder with automatic tension control



Electrical control cabinet



Nitrided alloy steel screw

WARRANTY & AFTER-SALES SERVICE

Every machine carries a warranty of one (1) year from the date of commissioning, covering the repair or replacement of parts in case of manufacturing defects. It does not cover malfunctions resulting from misuse, neglect or external factors such as unstable power, accidents, tampering or force majeure, nor wearing parts consumed in normal operation — sealing knives and cutting blades, Teflon tape, heaters, filters and screens.

Installation, commissioning and operator training are arranged by Miroplastic, and an operating manual is supplied with each machine. Technical support is available by telephone and email during the warranty period and thereafter. Spare parts and consumables are available from Miroplastic.

Photographs are for reference only. Miroplastic reserves the right to improve the specification of its machines without prior notice. Actual output depends on the material, width and thickness run.

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