

CAST FILM LINES

MELT EMBOSSED FILM / CLOTH-LIKE LAMINATE ▶



SML lines – for hygiene films/laminates with a textile touch

One of the main components in a diaper is the back sheet film or laminate, which can be made from melt embossed film or cloth-like laminate. These types of film can be used in a number of applications in the hygiene industry:

- Baby diapers
- Incontinence products
- Sanitary napkins
- Panty liners

The production of high quality hygiene films is a demanding task. Diverse recipes with PP and PE containing fillers only attain perfect homogeneity when specialised extruders are used.

The perfect textile touch of the film is a quality feature and in this connection SML lines employ the highly advantageous dry embossing process.

An engraved steel roller is used in combination with a large diameter silicon pressure roller. This offers unique advantages over the conventional wet process with water bath:

- Equal friction coefficient as compared to wet embossing
- Superior, uniform matting across the entire film width
- No water on the surface of the pressing roller and no water sediments in the line
- No need for water treatment
- Less maintenance
- Lower embossing pressure, extends the work life of the rubberised pressing roller.

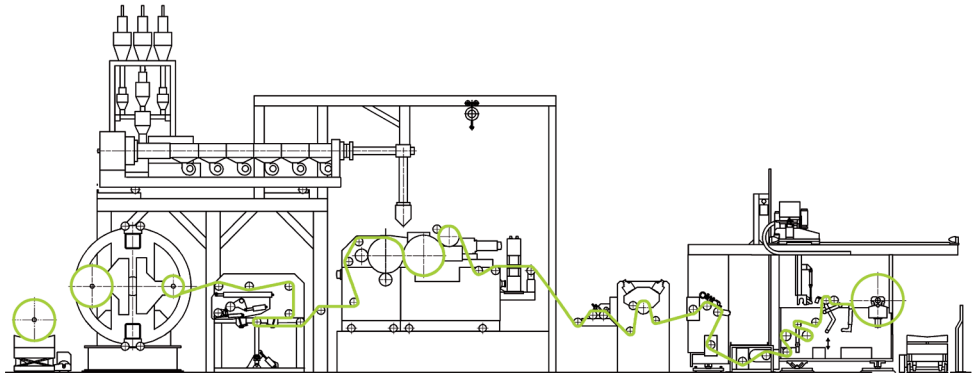
An automatic unwind with flying splice is integrated into the front of the line for the production of cloth-like laminate. The lamination of the film and the nonwoven is completed in the nip of the melt embossing unit.

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product

Applications:	baby diapers, incontinence products, sanitary napkins, panty liners
Raw materials:	LDPE, LLDPE, HDPE, PP, masterbatch
Film weight range:	15 - 40 g/m ²
Laminate weight range:	22 - 30 g/m ²
Final film width:	up to 3200mm



line configuration

RAW MATERIAL HANDLING

Feeding system:	individual pneumatic hopper loaders
Gravimetric dosing:	up to 6 components per extruder
Extruder output control:	integrated in SMILE control system

EXTRUSION

Extruder diameters:	60 / 75 / 90 / 105 / 120 / 135 / 150 / 180mm
L/D ratio:	28 or 33, depending on raw material and extruder size
Melt filtration:	hydraulic screen changers
Coextrusion:	up to 5 layers
Extrusion die:	automatic die with cross-profile control

CASTING UNIT

Pressure roll:	700mm, rubberised roller, tempered
Embossing roll:	800mm embossing steel roller, driven and tempered
Cooling roll:	400mm, chrome-plated roller, driven and tempered
Roller width:	2100 / 2300 / 2500 / 2700 / 2900 / 3200 / 3500 / 3800mm
Mechanical line speed:	350 / 450 m/min

DOWNSTREAM EQUIPMENT

Thickness measuring:	beta ray gauging system
Corona treatment:	one-sided, double-sided or reversible treatment

UNWIND FOR NONWOVEN

Basic concept:	EcoFlex automatic turret unwind specially designed for the unwinding of nonwoven 3-inch and 6-inch shaftless
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EDGE TRIMMING

Primary and secondary edge trimming:	inline edge trimming with blades or circular knives
Edge trim processing:	repelletising of edge trims with an inline recycling unit

WINDING

Basic concept:	series W2000 aerofilm horizontal sliding winder specially designed for the winding of hygiene films and laminates
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AUTOMATION

SMILE control system