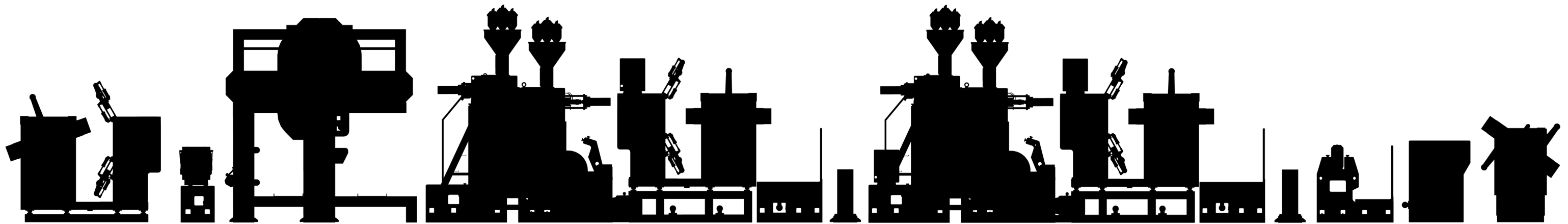
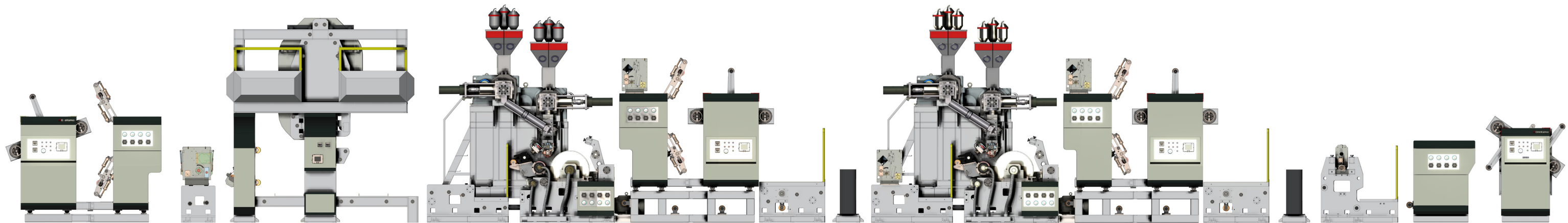


Extrusion Coating & Lamination



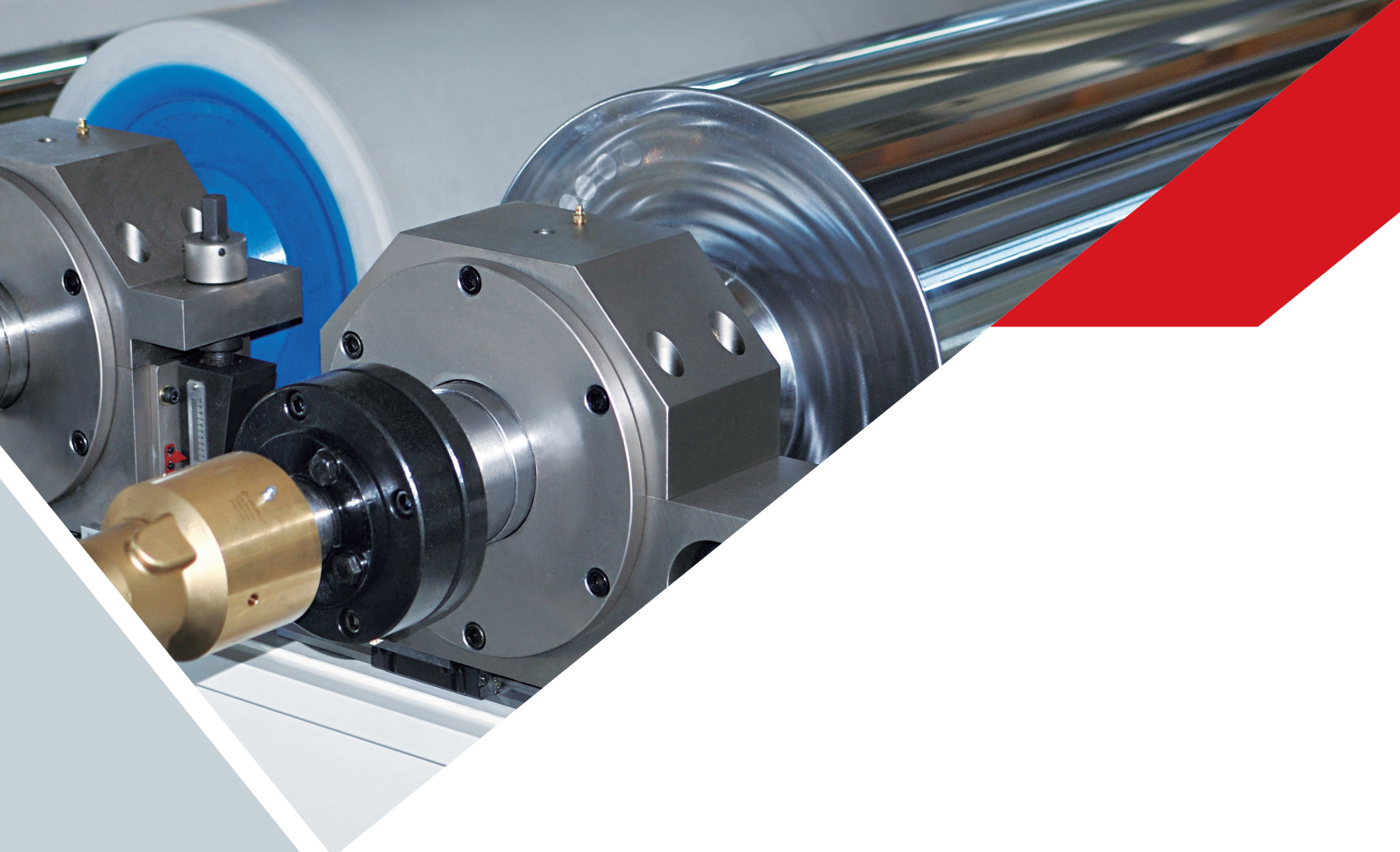
Extrusion Coating & Lamination



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Passion for Extrusion



Fundamentals of Extrusion Coating & Lamination

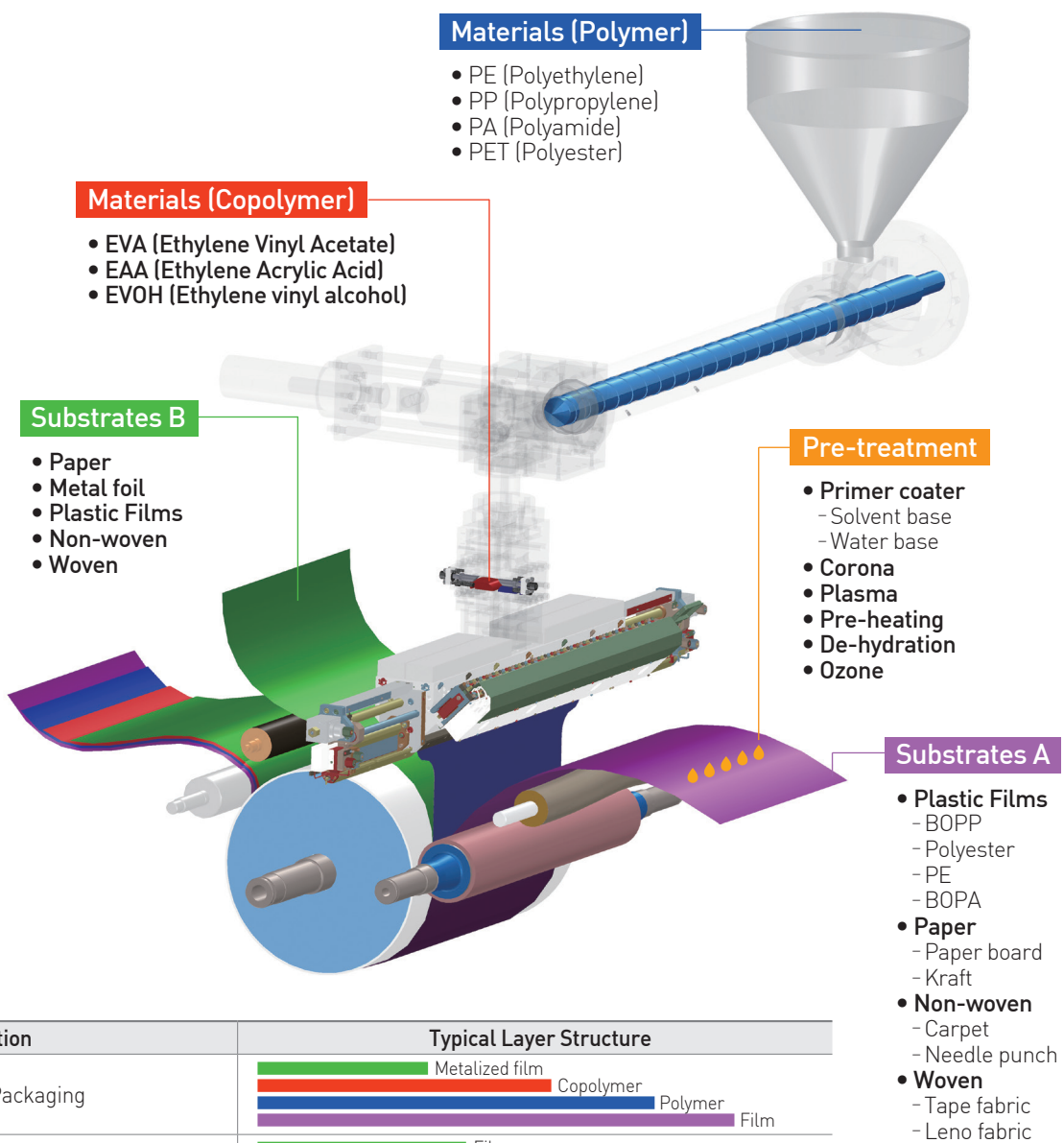
Literally, lamination means joining thin materials in a layered structure. This concept seems quite simple and straight forward, however, the application is not that easy. In order to deliver the intended performance as packaging materials and others, appropriate polymer materials and layer structures which are suitable for its own use and purpose are critical. Even equipped with above two important factors, unless there is a decent converting and extrusion system, you certainly can not get the standard products you desire. In this respect, we would like to explain briefly about the Fundamentals of Extrusion Lamination as below.

Introduction

Since founded in 1973, we, Daekwang Machinery have grown up with the support from the valued customers. We have strived to develop technology to provide the customers with maximum satisfaction. This led us to be one of the trusted converting and extrusion system manufacturers. Beginning in 1986 with the first exportation to Pakistan, we have been proactively focusing on the global market and we have exported over 200 systems to 24 countries so far. We are constantly investing in research and development in order to become one of the leading companies in this industry. You may be experienced our system indirectly when you brush your teeth. Because No. 1 manufacturer of Lamination Tube in the world is operating Daekwang's Extrusion Lamination System to produce their world class products, the tooth paste container you may have touched this morning presumably has passed through our systems on its long way to a final product.

Never contented with current technical level, we are trying to maximize efficiency, stability, marketability and user convenience of our systems. We are confident that our products guarantee successful business of our customers.

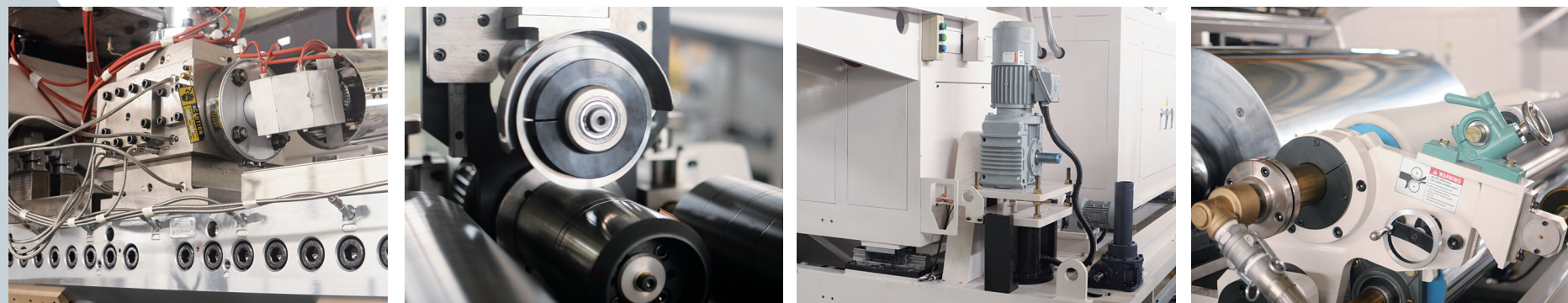
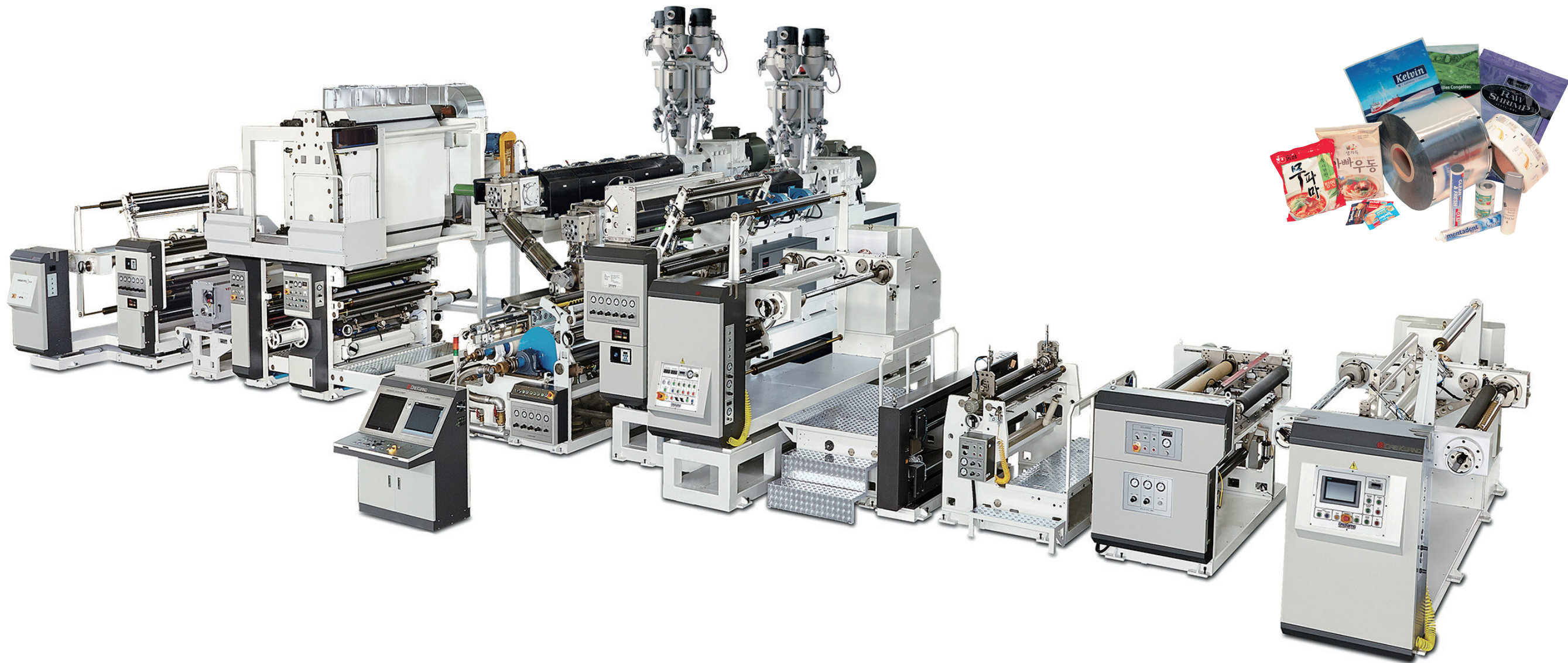
We promise to not only develop most reliable systems, but also provide the greatest service we can offer. Through our impressive system and dedicated staffs, we will strive to become the best business partner of you.



Application	Typical Layer Structure
Snack Packaging	<div><div></div> Metalized film</div> <div><div></div> Copolymer</div> <div><div></div> Polymer</div> <div><div></div> Film</div>
Toothpaste Container	<div><div></div> Film</div> <div><div></div> Polymer</div> <div><div></div> Copolymer</div> <div><div></div> Aluminum foil</div> <div><div></div> Copolymer</div> <div><div></div> Polymer</div> <div><div></div> Film</div>
Paper Cup	<div><div></div> Polymer</div> <div><div></div> Paper</div>
Tarpaulin/Banner	<div><div></div> Polymer</div> <div><div></div> Woven</div> <div><div></div> Polymer</div>
Vehicle Interior	<div><div></div> Polymer</div> <div><div></div> Non-woven</div>
Rust Prevention Packaging	<div><div></div> Paper</div> <div><div></div> Polymer</div> <div><div></div> Woven</div>

Flexible Packaging

Machines for flexible converting is the most sophisticated, complicated and delicate ones among many kinds of extrusion lamination systems. Because of strong requirements of barrier characteristic, in most cases the machine would be based on Co-extrusion configuration. In this regard, our systems are harmonized between extruders and lamination stations, enough durability to bear high speed processing and elaborating tension control.



Auto T-die & Feedblock

Edge Trimming Device (Ring Knife)

Motorized Extruder Carriage Moving System

Chill Roll & Silicon Coated Nip Roll

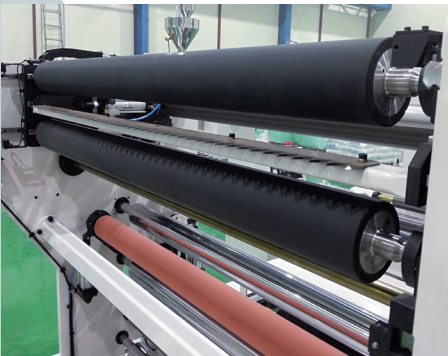
DKTCLF-110/90Ex	
Extruders	110mm & 90mm (Co-extrusion)
Machine speed (Meters / Min)	250 / 300 / 350
Substrates width(mm)	1,000~1,300 (Films, Metal foil, Low GSM Papers and so on)
Winders	Turret type with Flying splicer
Screen changer	Hydraulic screen changer(Discontinuous type)
Tension control	Pivot type dancer roll
Chill roll dia. (mm)	750 (Double shell spiral baffle)
Gauging system	Auto profile control T-die with Measurement system
Corona treatment	3-5

Paper substrates

This machine can be categorized into a heavy duty extrusion machine. Because of dealing with high GSM materials as the substrates, durability is the most important point. Since we always use verified materials, parts and mechanism that have been tested for a long time with rich experience, we are confident that our system will maximize your productivity without any bumps during process of lamination. Therefore, this will provide you with the competitive edge over your competitors.



DKSLP-110Ex



Auto Splicing System



Pre-heating Roller



Drum Surface Winder

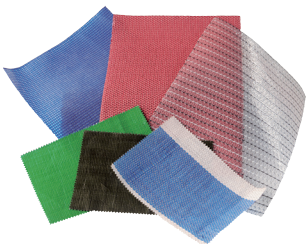
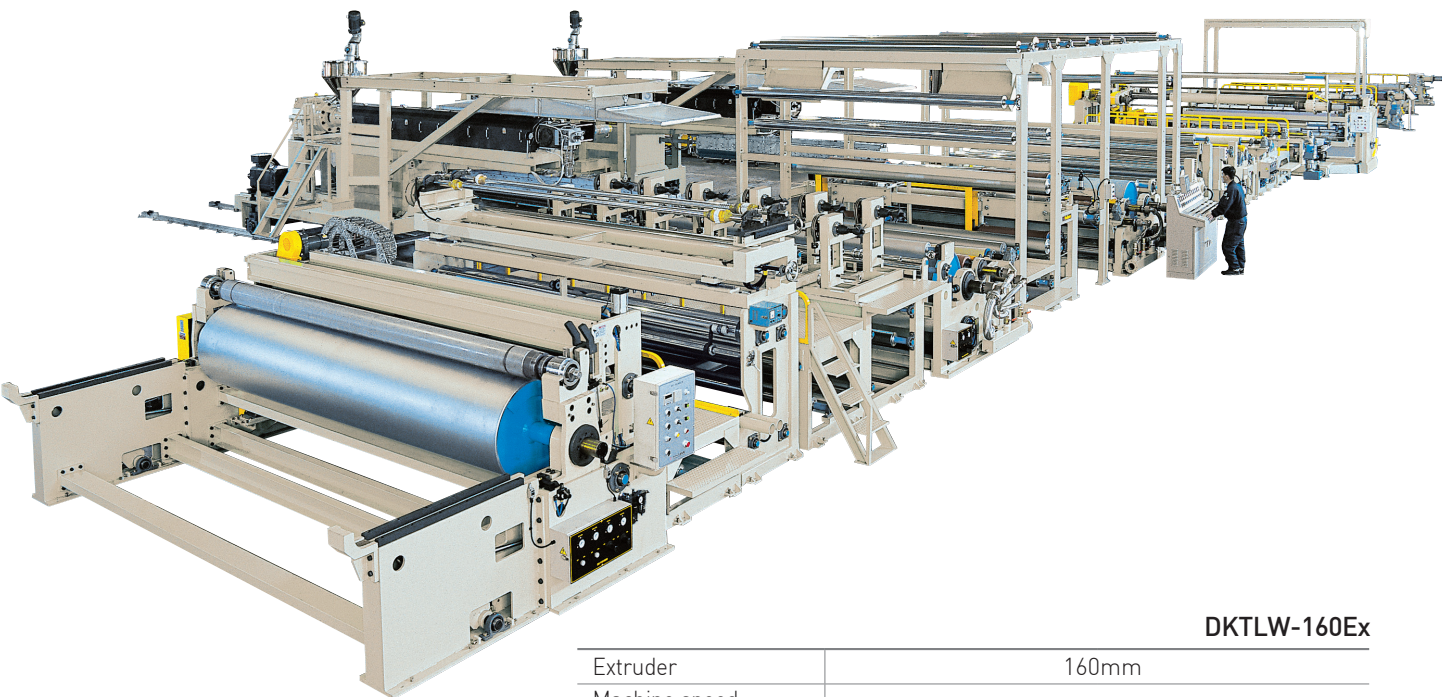


Single Screw Extruder

Extruder	110mm
Machine speed (Meters/Min)	250
Substrates width(mm)	1,600 (High GSM Papers, Film and so on)
Winders	Unwinder : Turret type with Flying splicer Rewinder : Drum surface winder
Tension control	Pivot type dancer roll & Loadcell control
Chill roll dia. (mm)	750 (Double shell spiral baffle)
T-die	Inner deckle bar
Corona treatment	1~2

Woven substrates

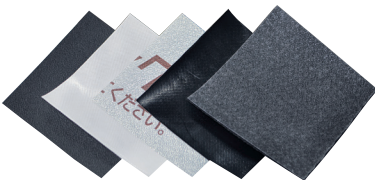
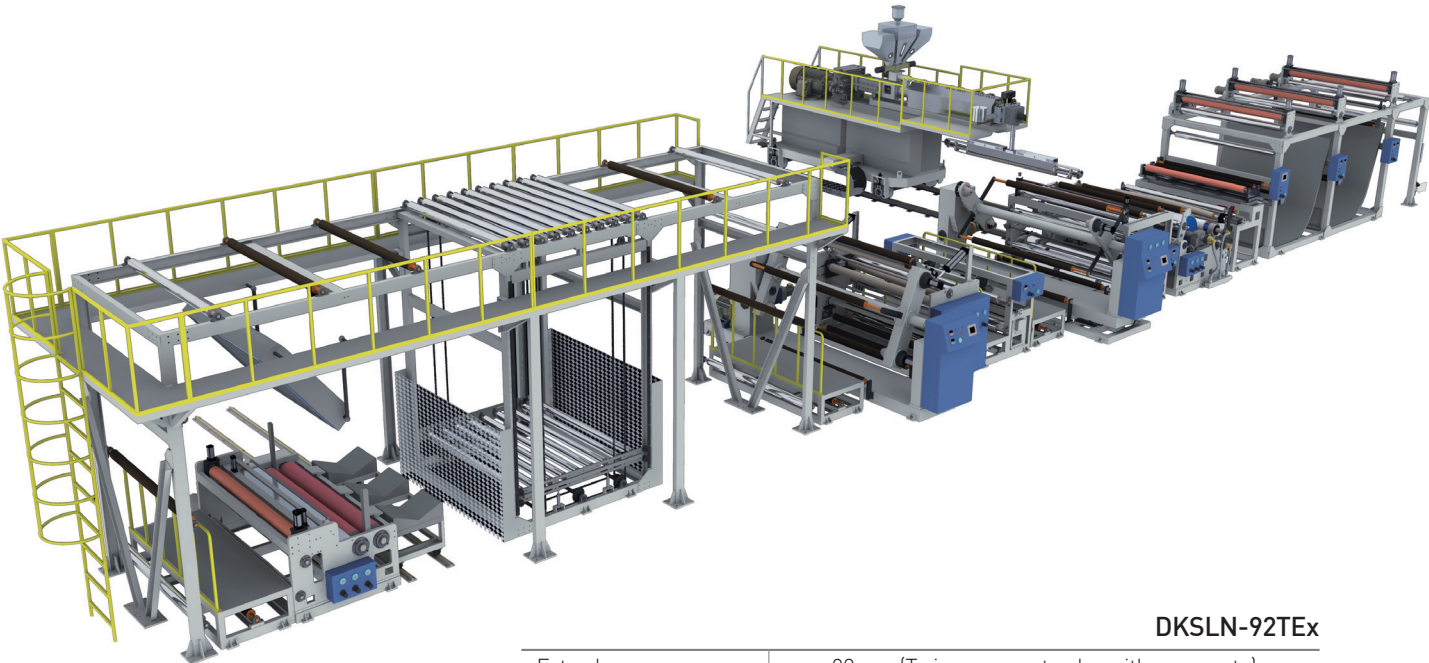
Extrusion lamination for woven converting has the most huge feature in terms of machine width. Daekwang has made several lines of 4.4 meters wide machines for woven extrusion lamination. By and large, woven is processed under high tension and this would give the machine a heavy load. That's why we pay special attention to durability of the machines. In addition, proper pre-treatment before lamination; pre-heating and de-hydration, is an important factor deciding the bonding strength between melt curtain and woven substrates.



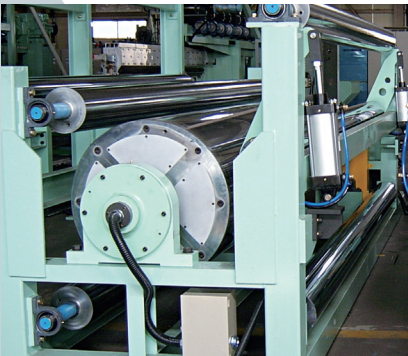
DKTLW-160Ex	
Extruder	160mm
Machine speed (Meters/Min)	200
Substrates width(mm)	4,200 (Tape and Leno fabric)
Winders	Unwinder : Turret type with Manual splicer Rewinder : Drum surface winder with crossing cutter
T-die	Inner deckle bar
Tension control	Loadcell tension control
Chill roll dia. (mm)	750 (Double shell spiral baffle)
Squeezing	Pressing by Steel and Rubber rolls
Pre-heating	Chrome surfaced roll with cartridge heaters

Non-woven substrates

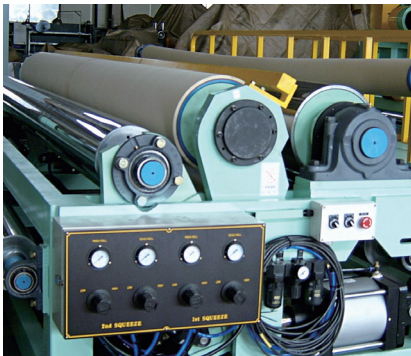
Non-woven materials have a wide variety of shape and properties. In this respect, if you can process a wide variety of substrates with one lamination machine, it would be a great advantage. We are well aware of this and has put into action. Regardless of thickness and kinds, we make it possible to process the substrates. As for the extruders, we are adopting twin screw extruders instead of single screw type in order to have greater flexibility in the process of polymer materials.



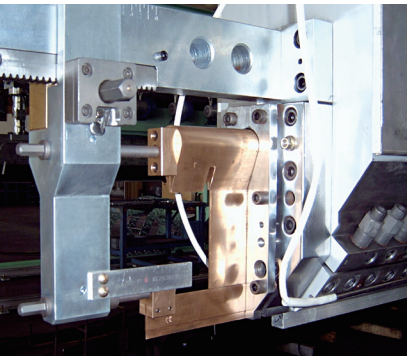
DKSLN-92TEx	
Extruder	92mm (Twin screw extruder with segments)
Machine speed (Meters/Min)	200
Substrates width(mm)	2,000 (Spunbond, Carpet, Needle punching and so on)
Substrates accumulation	Accumulator with roll moving
Winders	Unwinder : Fixed single shaft Rewinder : Turret type with flying slicer (for Spunbond) Two roll winder with crossing cutter (for Carpet)
Screen changer	Automatic continuous type
Chill roll dia. (mm)	750 (Double shell spiral baffle)
T-die	Inner deckle bar



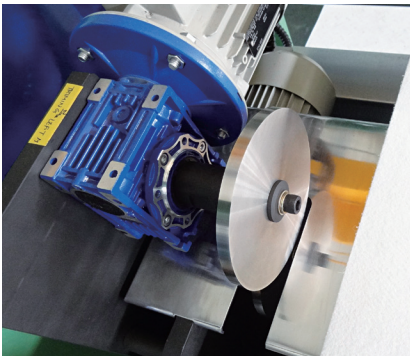
Pre-heating Roller



Squeeze Roller for Moisture Removal



Inner Deckle Bar of T-Die



Edge Trimming Device (Ring Knife)



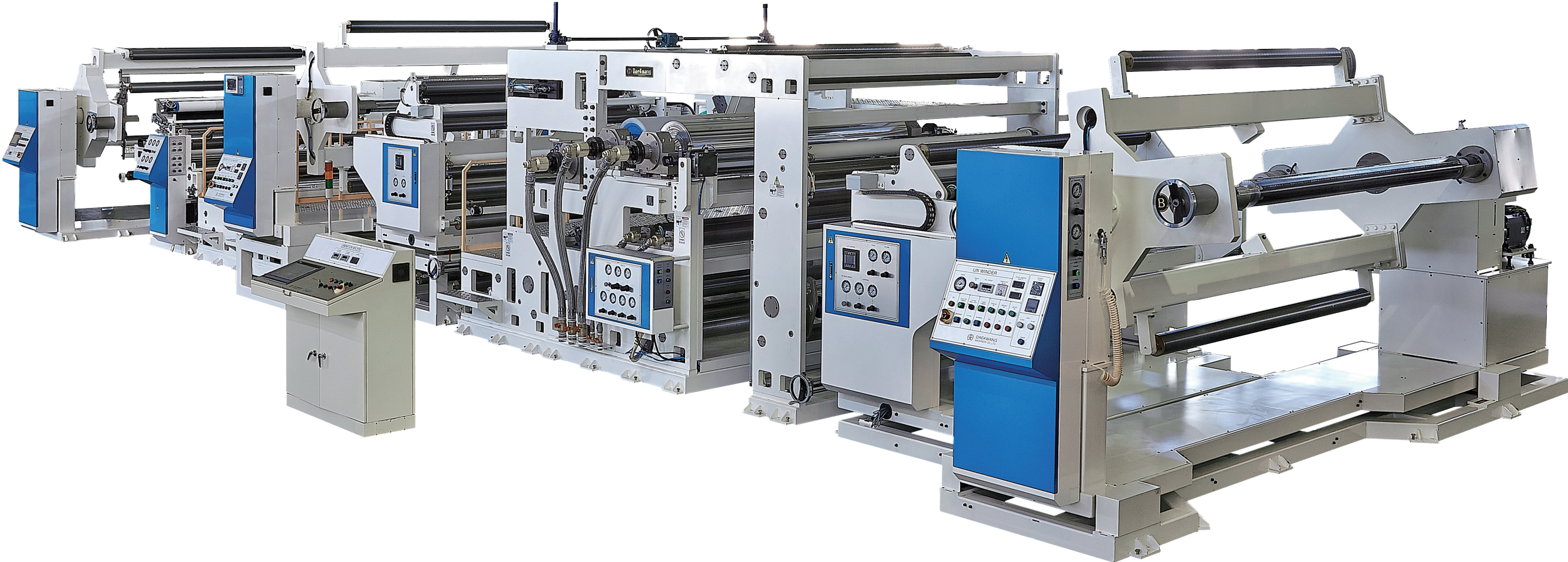
Accumulating System



Material Feeding for Twin Screw Extruder

Hot Melt Lamination

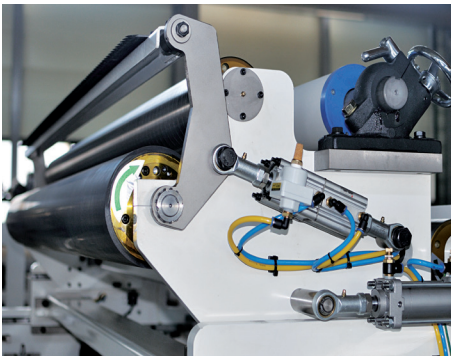
A tank melter and slot die are doing the same role as the screws and T-die do in the extrusion systems. One of strongpoint of this system is that you can operate this system at higher speed and with more convenience than an extrusion system. However, it has relatively narrower applicability than extrusion lamination because of its limitation in the processing materials.



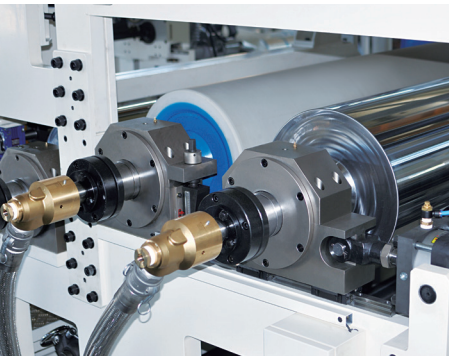
DKHL-SD



Slot Die Position Adjusting Device



Auto Splicing System



Nip Roll System for Lamination



Winder Control Panel with Touch Screen

Machine speed (Meters/Min)	800
Substrates width(mm)	2,300 (Film,Non-woven and so on)
Holt melt	Tank melter with slot die
Winders	Turret type with flying slicer
Tension control	Pivot type dancer roll