

FILM & FOIL INDUSTRY

BI-ORIENTED PLASTIC FILMS

Bi-oriented plastic films are made predominantly of polypropylene (BOPP) or polyester (BOPET) but other components are also used for technical (electronic) or multilayer applications (BOPA, BOPVC, BOPS ...).

DESIRED PROPERTIES

- Abrasion resistant
- Temperature resistance
- Resistant to a humid atmosphere (BOPP)
- Hydrophobic qualities

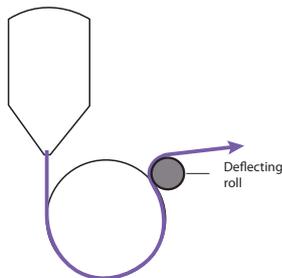
A SPECIFIC RANGE

The process of cross stretching, longitudinal and then transversal is reserved for the production of film with a controlled thickness from 3 to 350 microns and up to 10 meters in width.

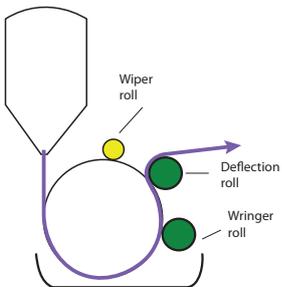
The transparency of films and their easiness to be printed or metallized make that the web tension and nips for covered rollers need to be perfectly controlled throughout the entire production process.

Hannecard offers a product range specially developed for the production of bi-oriented film.

This range - linked to high precision machinery - makes it possible to (re)coat rolls up to 12,000 mm long, allowing you to meet the most stringent requirements of these applications.



Extrusion by air (BOPET)



Extrusion in water (BOPP)

EXTRUSION

The film is extruded onto a cooled plated chrome roll. Depending on the film type, air or water cooling is used before guiding the film to the longitudinal stretching section.

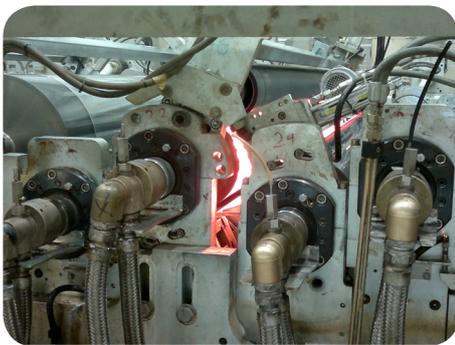
Deflector and wringer rolls

Position	Solution	Characteristics and advantages
Dry extrusion	NipFoil-XPE-AS* Black 65-70-80-90 shore A	<ul style="list-style-type: none"> • Excellent abrasion and tear resistance • Excellent resilience, good contact behavior with plastic film • Resistant to ozone, solvents and temperature • Anti-static
Extrusion through water	NipFoil-XP-AS Green-Grey 50-65-75-80 shore A	<ul style="list-style-type: none"> • Excellent abrasion and tear resistance • Excellent resilience, good contact behavior with plastic film • Resistant to ozone, solvents and temperature • Recommended in case of water cooling • Anti-static
Wiper roller	NipFoil-S Grey 50-60-70 shore A	<ul style="list-style-type: none"> • Excellent dynamic behaviour • Very good mechanical properties • Resistant to ozone, solvents and temperature

* New generation Hannecard ECO quality

DESIRED PROPERTIES FOR NIP MDO ROLLERS

- Temperature resistance
- Resistant to ozone
- Mechanical and dynamical resistance properties



LONGITUDINAL STRETCHING (MDO Machine Direction Orientation)

Nip rollers

Type	Solution	Characteristics and advantages
Standard	NipFoil-Plus Beige 70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Increased mechanical and dynamical properties • Excellent abrasion resistance • Temperature resistance up to 130 ° C
	NipFoil-XP-AS Black 65 & 75 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Increased mechanical and dynamical properties • Excellent abrasion resistance • Temperature resistance up to 130 ° C • Anti-static
High performance	NipFoil-HP Black 65 & 70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Outstanding mechanical and dynamical properties • Excellent abrasion resistance • Temperature resistance up to 150 ° C • Anti-static
High temperature	NipFoil-HT Red 70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Good mechanical performance • Excellent temperature resistance up to 180°C • Excellent non-stick properties

PROCESSING AND WINDING SECTION (PRS Pull Roll Stand)

Corona treatment rollers

Type	Solution	Characteristics and advantages
Standard	Corona-S Grey 70-75-80 shore A	<ul style="list-style-type: none"> • Very good and stable electrical insulator • Excellent electrical stability up to 50 kV discharge • Best available quality/price value
High Performance	Corona-XP Green 70 shore A	<ul style="list-style-type: none"> • Covering range with improved purity • Improved abrasion resistance • Remarkable electrical stability over the complete covering up to 50 kV discharge • For the most stringent requirements in Corona insulation
High performances + Food contact	Corona-XP FDA Grey 70 shore A	<ul style="list-style-type: none"> • Covering with an outstanding purity • Very high resistance to abrasion • Remarkable electrical stability over the complete covering up to 50 kV discharge • For the most stringent requirements in corona insulation • Compatible for food contact

See our leaflet "Corona treatment" for more info on our solutions.

Nip rollers for corona treatment and deflector rollers

Type	Solution	Characteristics and advantages
Standard	NipFoil-S-AS Black 50-70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Good mechanical performance • Temperature resistance up to 130 ° C • Anti-static
High performance	NipFoil-XP-AS Black 50 & 65 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Excellent mechanical properties and abrasion resistance • Temperature resistance up to 130 ° C • Anti-static
	NipFoil-XPE-AS * Black 65 & 70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Excellent mechanical properties and abrasion resistance • Temperature resistance up to 130 ° C • Anti-static

* New generation Hannecard ECO quality

Web tensioning side rollers

These rolls are used in contact with a second rubber roll or as a counterpart for metallic rolls. They are sometimes oriented to increase the tension of the film.

Type	Solution	Characteristics and advantages
High performance	NipFoil-HP Green - Rubber 70 shore A	<ul style="list-style-type: none"> • Outstanding resilience properties • Exceptional temperature resistance • Excellent resistance to oils and greases which could come from the transversal stretching chain

Nip rollers for flame treatment

Type	Solution	Characteristics and advantages
Standard	NipFoil-XPE-AS * Black 65 & 70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Increased mechanical and dynamical properties • Excellent abrasion resistance • Temperature resistance up to 130 ° C • Anti-static
High performance	NipFoil-HP Black 65 & 70 shore A	<ul style="list-style-type: none"> • Excellent resistance to ozone • Exceptional abrasion resistance • Exceptional mechanical and dynamical properties • Temperature resistance up to 150 ° C • Anti-static

* New generation Hannecard ECO quality

Spreader rolls

Spreader rolls are used to avoid the appearance of wrinkles during the film transport. They can be metallic or rubber coated and they generally contain a spreader type groove profile.

Also curved (banana) rollers are often used. Hannecard proposes multiple covering and finishing types. Our solutions can be found in the leaflet "Plastic film spreading".

Winding and slitting rolls

To improve the winding quality, elastomer covered contact, lay-on and drum rolls are used in contact with the film bobbin. Their composition and finishing is very critical in order to assure the absence of wrinkles and a correct bobbin shape.

We refer to our leaflet "Winding and slitting" for detailed information on the Hannecard range.



RELATED DOCUMENTS

- Solutions - 'Plastic film industry'
- Solutions - 'Winding & Slitting'
- Solutions - 'Blown Extrusion'
- Solutions - 'Cast Extrusion'
- Solutions - 'Corona treatment'
- Solutions - 'Plastic film spreading'
- Solutions - 'PVC & other soft plastics processing'

MORE INFORMATION?

For more information, please contact your local Hannecard partner or visit our website at: www.hannecard.com