

# FOIL-FILM-TAPE WIRE MACHINERY

PRODUCT CATALOGUE



# ABOUT

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# US

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# GURFIL

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GURFIL started serving the cable industry in 1981 with the main principle of quality, service, and responsibility. Today GURFIL has its place in the cable industry with these principles.

GURFIL has been serving its valued customers with foil, film and tape products for many years. In addition, GURFIL started its wire and cable machinery products 11 years ago and became the main supplier for the cable manufacturers. In 2010 GURFIL's production plant was moved to ESENYURT ISTANBUL, due to the increased demand on the local and international market.

Currently GURFIL serves customers in EUROPE, AFRICA, MIDDLE EAST and EASTERN BLOCK COUNTRIES.

In order to give the best service and products, GURFIL has been managed by ISO 9001:2008 quality management system and all GURFIL products come with ROHS Certificate.

GURFIL's state of art production line of full automated computerized slitting, rewinding, spooling and rotogravure laminating machines are designed and produced by GURFIL for high quality, stable and fast production.

GURFIL has implemented a flexible production technology according to customer demand and to satisfy the market with a wide range of products.



FOIL FILM TAPE



# FOIL -FILM- TAPE

## ALU-PET / ALU-PET-ALU / ALU-PET-SY / ALU-PVC / ALU-HSPET

Aluminium foil laminated products can be produced with wide range of combination.

1. Aluminium Foil and PET Film Lamination (ALU-PET)
2. Aluminium Foil, PET Film and Aluminium Foil Lamination (ALU-PET-ALU)
3. Aluminium Foil, PET Film and Surlyn Film Lamination (ALU-PET-SY)
4. Aluminium Foil, PVC Film Lamination (ALU-PVC)
5. Aluminium Foil - Heat Sealable PET Film Lamination (ALU-HSPET)

On the construction, Aluminium Foil provides conductivity and electromagnetic insulation PET Film provides electrical insulation and high mechanical strength. Surlyn Film, PVC Film and Heat Sealable PET Film helps the tape to grasp and bond the surface that is applied. Aluminium Foil laminates is mainly used as shielding foil on coaxial cables, signal cables, control cables, instrumentation cables, LAN cables, data communication cables and most of the other communication cables. Aluminium Foil laminates is also used in ventilation industry for air duct pipe production.

### Available options ;

- Pad winded
- Spool winded
- Lubricated
- Customer requested colour



# FOIL - FILM - TAPE

ALU-PET	Composition	Thickness (micron)	Weight, gr/m <sup>2</sup>	Yield, m <sup>2</sup> /kg
6 ALU - 12 PET	6 mic. ALU - 12 mic. PET	20 +/- 2	35	28.6
7 ALU - 12 PET	7 mic. ALU - 12 mic. PET	21 +/- 2	38	26.3
9 ALU - 12 PET	9 mic. ALU - 12 mic. PET	23 +/- 2	43	23.2
9 ALU - 15 PET	9 mic. ALU - 15 mic. PET	26 +/- 2	47	21.3
9 ALU - 19 PET	9 mic. ALU - 19 mic. PET	30 +/- 2	52.2	19.1
9 ALU - 23 PET	9 mic. ALU - 23 mic. PET	34 +/- 2	59	17.2
9 ALU - 36 PET	9 mic. ALU - 36 mic. PET	47 +/- 3	76.2	13.1
12 ALU - 12 PET	12 mic. ALU - 12 mic. PET	26 +/- 2	50.9	19.6
12 ALU - 19 PET	12 mic. ALU - 19 mic. PET	33 +/- 2	60.5	16.5
12 ALU - 23 PET	12 mic. ALU - 19 mic. PET	38 +/- 2	67.6	14.8
12 ALU - 36 PET	12 mic. ALU - 36 mic. PET	50 +/- 3	85.2	11.3
15 ALU - 19 PET	15 mic. ALU - 19 mic. PET	37 +/- 2	70.1	14.3
25 ALU - 12 PET	25 mic. ALU - 12 mic. PET	40 +/- 3	87.3	11.5
25 ALU - 23 PET	25 mic. ALU - 23 mic. PET	51 +/- 3	102.7	9.7
40 ALU - 12 PET	40 mic. ALU - 12 mic. PET	55 +/- 4	127.8	7.8
40 ALU - 23 PET	40 mic. ALU - 23 mic. PET	66 +/- 4	143.2	7
40 ALU - 36 PET	40 mic. ALU - 36 mic. PET	79 +/- 5	161.4	6.2

ALU-PET-ALU	Composition	Thickness (micron)	Weight gr/m <sup>2</sup>	Yeild, m <sup>2</sup> /kg
9 ALU - 12 PET - 9 ALU	9 mic. ALU - 12 mic. PET - 9 mic. ALU	33 +/- 3	68.4	14.6
9 ALU - 15 PET - 9 ALU	9 mic. ALU - 15 mic. PET - 9 mic. ALU	36 +/- 3	72.6	13.8
9 ALU - 23 PET - 9 ALU	9 mic. ALU - 23 mic. PET - 9 mic. ALU	44 +/- 3	83.8	11.9
12 ALU - 15 PET - 12 ALU	12 mic. ALU - 15 mic. PET - 12 mic. ALU	42 +/- 3	88.8	11.9
25 ALU - 12 PET - 25 ALU	25 mic. ALU - 12 mic. PET - 25 mic. ALU	68 +/- 3	157.8	6.4

ALU-PET-SY	Composition	Thickness (micron)	Weight, gr/m <sup>2</sup>	Yeild, m <sup>2</sup> /kg
9 ALU - 12 PET - 25 SY	9 mic. ALU - 12 mic. PET - 25 mic. SY	50 +/- 3	68.5	14.6
9 ALU - 23 PET - 25 SY	9 mic. ALU - 23 mic. PET - 25 mic. SY	61 +/- 3	82	12.2
9 ALU - 12 PET - 30 SY	9 mic. ALU - 12 mic. PET - 30 mic. SY	55 +/- 3	73.8	12.1
9 ALU - 23 PET - 30 SY	9 mic. ALU - 23 mic. PET - 30 mic. SY	66 +/- 3	89	9.2

ALU-PVC	Composition	Thickness (micron)	Weight, gr/m <sup>2</sup>	Yeild, m <sup>2</sup> /kg
25 ALU - 25 PVC	25 mic. ALU - 25 mic. PVC	53 +/- 3	104	9.6
12 ALU - 25 PVC	12 mic. ALU - 25 mic. PVC	40 +/- 3	68	14.5
9 ALU - 12 PET - 25 PVC	12 mic. ALU - 12 mic. PET - 25 mic. PVC	51 +/- 3	79.5	12.6

# FOIL-FILM-TAPE

## CU-PET / CU-SY

Copper Foil Laminates (CU-PET / CU-SY) are divided into two categories;

- Copper Foil and PET Film Lamination (CU-PET)
- Copper Foil and Surlyn Film Lamination (CU-SY)

On the construction copper foil provides conductivity and electromagnetic insulation. PET Film provides electrical insulation and high mechanical strength. Surlyn Film helps the Tape to grasp and bond the surface that is applied. Copper Foil provides resistance to corrosion and radiation, can be soldered, and has higher conductivity compared to aluminum foil. Copper Foil is mainly used on coaxial cables, signal cables, control cables, instrumentation cables, LAN cables, data communication cables, and most of other communication cables.

### Available options ;

- Pad wound
- Spool wound
- Lubricated

CU-PET	COMPOSITION	THICKNESS (micron)	WEIGHT g/m <sup>2</sup>	YIELD m <sup>2</sup> /Kg
15 CU - 23 PET	15 mic.CU - 23 mic. PET	41 +/- 2	168.7	6.2
18 CU - 23 PET	18 mic.CU - 23 mic. PET	44 +/- 2	195.4	5.3
20 CU - 23 PET	20 mic.CU - 23 mic. PET	46 +/- 2	213.2	4.7

CU+PET	COMPOSITION	THICKNESS (micron)	WEIGHT g/m <sup>2</sup>	YIELD m <sup>2</sup> /Kg
18 CU - 25 SY	18 mic.CU - 25 mic. SY	46 +/- 3	182.7	5.1
18 CU - 30 SY	18 mic.CU - 30 mic. SY	51 +/- 3	191.2	4.9

# FOIL-FILM-TAPE

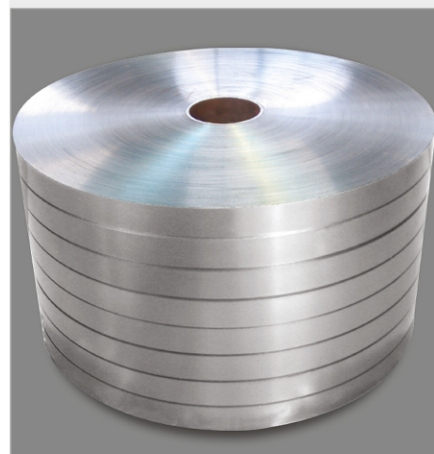
## COPOLYMER COATED ALUMINUM TAPE (ALU-COPOLY)

Single sided or double sided Copolymer Coated Aluminium Tape provides high bonding to aluminium and polyethylene covered cable surface. Most commonly used for production of telecommunication and medium voltage cables in order to avoid interference and to ensure the separation of inner cable groups.

Double Sided	Thickness	Weight (gr/m <sup>2</sup> )	Yield (m <sup>2</sup> /kg)
Copolymer 0,05 mm / Alu 0,150 mm / Copolymer 0,05 mm	250 mic	499	2,0
Copolymer 0,05 mm / Alu 0,185 mm / Copolymer 0,05 mm	285 mic	593	1,7
Copolymer 0,05 mm / Alu 0,200 mm / Copolymer 0,05 mm	300 mic	634	1,6

Single Sided	Thickness	Weight (gr/m <sup>2</sup> )	Yield (m <sup>2</sup> /kg)
Copolymer 0,04 mm / Alu 0,080 mm	120 mic	254	3,9
Copolymer 0,05 mm / Alu 0,100 mm	150 mic	316	3,2
Copolymer 0,05 mm / Alu 0,150 mm	200 mic	453	2,2
Copolymer 0,05 mm / Alu 0,185 mm	235 mic	574	1,8
Copolymer 0,05 mm / Alu 0,200 mm	250 mic	588	1,7
Copolymer 0,05 mm / Alu 0,300 mm	350 mic	859	1,2

\*Other thickness combinations are available upon request





# FOIL-FILM-TAPE

## COPPER TAPE

Electrolytic, Annealed and CU-ETP alloy copper tapes are used for cable screening of medium and high voltage power cables.

Thickness	Min	0,10 mm
	Max	0,80 mm
Width	Min	10 mm
	Max	650 mm

## POLYESTER (PET) FILM

[Clear - Corona treated - Heat Sealable - Metalised]

PET Film is successfully used in a wide range of applications, due to its excellent combination of optical, physical, mechanical, thermal, and chemical properties, as well as its unique versatility.

PET Film has been widely used in the cable industry for many years.

During cable production PET Film is used for forming the perfect shape on cable. On Communication, data transfer and instrumentation cable production, PET Film is used as shielding on pairs or grouping the cables.

PET Film has a good scale of heat resistance due to its high voltage and perfect electrical isolation characteristics.

### Available options ;

- Pad winded
- Spool winded
- Customer requested colour

PET FILM	CONSTRUCTION	THICKNESS (micron)	WEIGHT g/m <sup>2</sup>	YIELD m <sup>2</sup> /Kg
12 PET	PET Film	12 +/- 1	6.8	59.2
23 PET	PET Film	23 +/- 1	32.2	31.3
36 PET	PET Film	36 +/- 2	50	19.9
50 PET	PET Film	50 +/- 2	70	14.2
75 PET	PET Film	75 +/- 3	105	9.6
100 PET	PET Film	100 +/- 4	141	7.1

# FOIL-FILM-TAPE

## MICA TAPE

Mica Tape for flame-resistant wires and cables consist of the heat resistant phlogopite, muscovite or synthetic mica bonded to an electrical grade fiberglass cloth or PE film as the supporting layer, impregnated with a special high temperature resistant silicon resin. For excellent flame resisting characteristics, Mica Tapes are widely used for power, control, instrumentation, and signaling cables.

### Divides in 3 types;

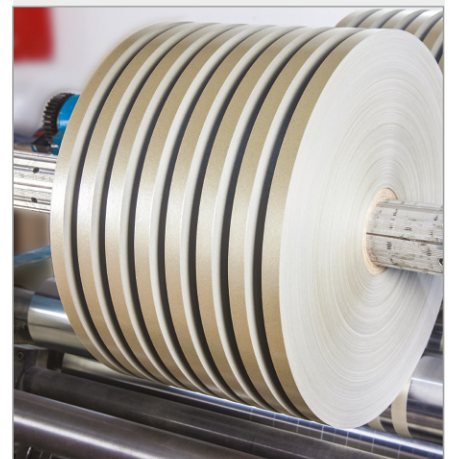
- Phlogopite Mica Tape
- Synthetic Mica Tape
- Muscovite Mica Tape

### Properties

- Exceptionally high dielectric strength at high temperature
- High fire resistance
- Excellent tensile strength and good shearing and shock resistance
- Strong resistance to radiation, acid, and alkali
- No-toxic under high temperature
- Excellent flexibility
- Phlogopite and muscovite mica tapes can withstand up to 950 °C while Synthetic mica tapes have a fire resistance class up to 1100 °C.

### Available options ;

- Pad winded
- Spool winded



# FOIL-FILM-TAPE

## FIBERGLASS TAPE

Fiberglass Tapes are widely used for power and control cables, instrumentation and signaling cables due to its excellent flame resistance. Since Fiberglass Tape is high flexible and has high tensile strength it can be easily applied with high speed standard wrapping equipments.

### Properties of Fiberglass Tapes:

- High dielectric strength
- High tensile strength
- Strong resistance to radiation, acid and alkali
- Non-toxic under high temperature
- Excellent flexibility
- Heat resistance up to 950°C

### Available Specifications:

Width: 15, 20, 25, 30, 40, 50, 60mm

Length: 800m (No Joint)

Core ID: 76mm

### Available options ;

- Pad winded
- Spool winded





# FOIL-FILM-TAPE

## FOAMED POLYPROPYLENE (PP) TAPE

White in color, Mono-orient extruded and density reduced with gas polypropylene tape is an appropriately priced product which is used as wrapping, binding and insulating film in low and medium voltage cables (from 1 to 30 kV).

### Available options ;

- Pad wound
- Spool wound

SPECIFICATION	UNIT	VALUE
Thickness	Micron	125
Density	gr/cm <sup>3</sup>	0,50 + - %5
Yield	m <sup>2</sup> /Kg	65 + - 5
Breaking strength	N/mm <sup>2</sup>	≥ 100
Elongation	%	≥ 20

## KRAFT PAPER

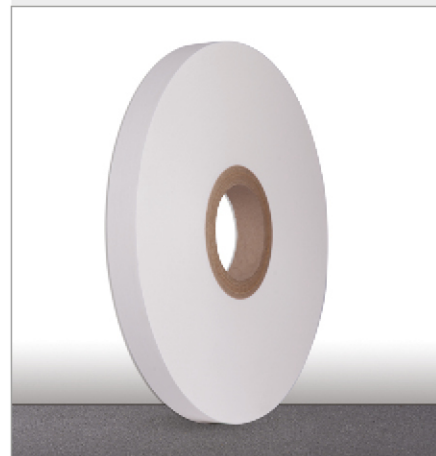
Kraft paper prevents the adhesion of isolated wire group to jacket in energy cables.

40gr/m<sup>2</sup> – 70 gr/m<sup>2</sup> – 90 gr/m<sup>2</sup>

### Available options ;

- Pad wound
- Spool wound

SPECIFICATION	UNIT	VALUE
Weight	gr/m <sup>2</sup>	40
Breaking Strength	Kg/mm <sup>2</sup>	≥ 3,43
Elongation	%	≥ 2,5



# FOIL-FILM-TAPE

## PP IDENTIFICATION TAPE

Colored polypropylene identification tape.

Monoxial polypropylene tapes with high tension value and suitable for high speed spiral winding are used for multi wired cable identification.

### Available colours:

Blue - White - Orange - Red - Yellow - Black - Grey - Green - Violet - Brown - Transparent - White/Blue - White/Orange - White/Brown - White/Green - White/Grey

SPECIFICATION	UNIT	VALUE
Thickness	Micron	50 + - 5
Width	mm	3 + - 0,01
Breaking Strength	N/mm <sup>2</sup>	≥ 475
Elongation	%	≥ 21
Bobbin Internal Diameter	mm	90
Bobbin Width	mm	170
Roll Outside Diameter	mm	200
Bobbin Winding Width	mm	150

## CREPE PAPER

Crepe Paper for electrical applications is used for cable insulation.

Crepe Paper is ideally suited to insulate irregular shapes and surfaces where a proper insulation can not be reached with a normal flat paper. It provides flexibility to the cable. Such cables can be bent and twisted without tearing or loosening the insulation.

SPECIFICATION	UNIT	VALUE
Weight	gr/m <sup>2</sup>	120
Elongation	%	≥ 75

# FOIL-FILM-TAPE

## FLEECE (BEDDING, TNT) TAPE

Fleece Tape made of polyester non-woven fiber can resist to extrusion and vulcanization heat. Used for bedding and separation on cable production.

### Available options ;

- Pad wound
- Spool wound

	Thickness (micron)	Weight (gr/ m <sup>2</sup> )	Breaking Strength (N/cm)	Elongation (%)
30 gram/m <sup>2</sup>	60 +-20	30 +- 5	≥ 35	12
40 gram/m <sup>2</sup>	80 +- 20	40 +- 5	≥ 40	12

## SEMI-CONDUCTIVE TAPE

Semi-Conductive Tape is made of polyester non-woven fiber, can resist high temperature, used for bedding and separation on cable production.

### Available options ;

- Pad wound
- Spool wound

SPECIFICATION	UNIT	VALUE
Thickness	Micron	150 +- 0,02
Weight	gr/ m <sup>2</sup>	60 +- 10
Breaking Strength	N/mm <sup>2</sup>	≥ 30
Elongation	%	≥ 12






# FOIL-FILM-TAPE

## NON-CONDUCTIVE WATER BLOCKING (Swelling) TAPE

Non-Conductive Water Blocking Tape is made of polyester non-woven tape, polyacrylic swelling nano powder and anti corrosion chemicals to protect the cable against water.

### Available options ;

- Pad wound
- Spool wound



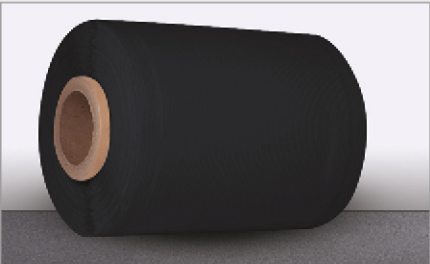

	Thickness (micron)	Weight (gr/ m <sup>2</sup> )	Elongation (%)
GRF-SDDZ36	360	75	12
GRF-SDDZ25	250	90	12

## SEMI-CONDUCTIVE WATER BLOCKING (Swelling) TAPE

Semi-Conductive Water Blocking Tape is used on energy and power cable production to protect the cable against water.

### Available options ;

- Pad wound
- Spool wound



	Thickness (micron)	Weight (gr/ m <sup>2</sup> )	Elongation (%)
GRF-SDDBZ30	300	110	12
GRF-SDDBZ45	450	95	12

# FOIL-FILM-TAPE

## RIPCORD YARN

Ripcord Yarns starting from 1100 dtex. High strength Ripcord yarns are used as a binder and also for easily removing the jacket of cables. Ripcords can be used in almost any type of cable, providing easy access to the cable core during installation or maintenance. Due to using high tenacity base polyester and the high quality of the twisting, Polyester ripcord can cut through some corrugated steel tapes.



## FIBERGLASS YARN

Fiberglass Yarn with characteristic of high electrical insulation and high temperature resistance used for high temperature wire and flame resistant cable production.



WIRE





## COPPER CLAD ALUMINUM WIRE - CCA

CCA wire possesses the characteristics of both copper wire and Aluminium wire: low density from Aluminium wire and good conductor from Copper wire. CCA wire is widely used in different electrical applications requiring the conductivity of Copper while retaining much of the weight advantages of Aluminium.

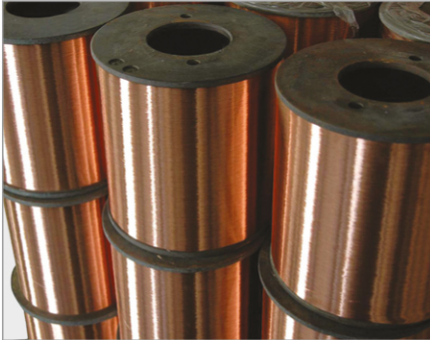
### Properties of Copper Clad Aluminum Wire

- **DC Resistivity:** DC resistivity of Copper Clad Aluminium Wire is 1.5 times than that of pure copper wire.
- **Light Weight:** Weight percentage between CCA wire and pure copper wire is 37% to 40%.
- **Low Cost:** Under the circumstance of the same weight and wire size, CCA wire length is 2.5 to 2.7 times more than pure copper wire, which lowers the production cost.
- **Environmental Friendly:** CCA wire saves the copper resources and the production process is nonpolluting.
- **Wide Range of Usage:** High-frequency signal cables, Standard wire, Conductor of electric power cable, Conductor of automotive cable, Building distribution wire, Fuse, Radio frequency shielding, Conductor of control cable, Cotton covered wire busbar and many other products.



# WIRE

## COPPER CLAD STEEL WIRE - CCS



Copper Clad Steel Wire is made up of plating uniform copper on the surface of high-quality low-carbon steel wire, the metallic cohesion is perfectly combined of copper and steel core, and there will be no flaking off during the heat treatment or mechanical workout. CCS Wire is the best new bimetal wire instead of pure copper wire. Main applications: flexible coaxial cable, audio and video cable, vehicle signal cable, network cable, data transmission cables and so on. Form of use: as cable conductor, braiding and shielding, as single wire conductor and other conductors.

Available in different conductivity options such as 21%, 30%, 40% Conductivity

### Properties of Copper Clad Steel Wire:

- Uniform plating
- Excellent electrical conductivity
- Good tensile strength
- Mechanical strength and high flexibility

## ALUMINIUM ALLOY WIRE



Aluminium Alloy Wire is mainly used as braiding wire for coaxial cable and flexible hose production. Due to its low density compared to copper wire and high strength, Aluminium Alloy Wire is preferred by manufacturers.

### Properties of Aluminium Alloy Wires

- Light Weight
- Good Heat Dissipation
- High Tensile Strength
- Low Cost

Available dimension: 0.12 mm

### Available reel sizes:

DIN 160 ABS Reel

DIN 250 ABS Reel

# WIRE

## 3 LAYER PHYSICAL FOAMED CONDUCTORS

3 Layer Physical Foamed Core products are produced by using Skin/Foam/Skin system and gas injection extruding line to be used for coaxial cable production.

### Available types:

RG 59 - With CCS Conductor  
RG-6 with CCS Conductor  
RG-11 with CCS Conductor  
RG 59 - With CU Conductor  
RG-6 with CU Conductor  
RG-11 with CU Conductor

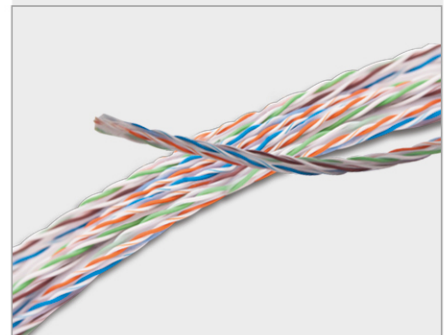
\* Other types are available upon request

## SEMI-FINISHED CATEGORY 6 CABLES (CAT 6)

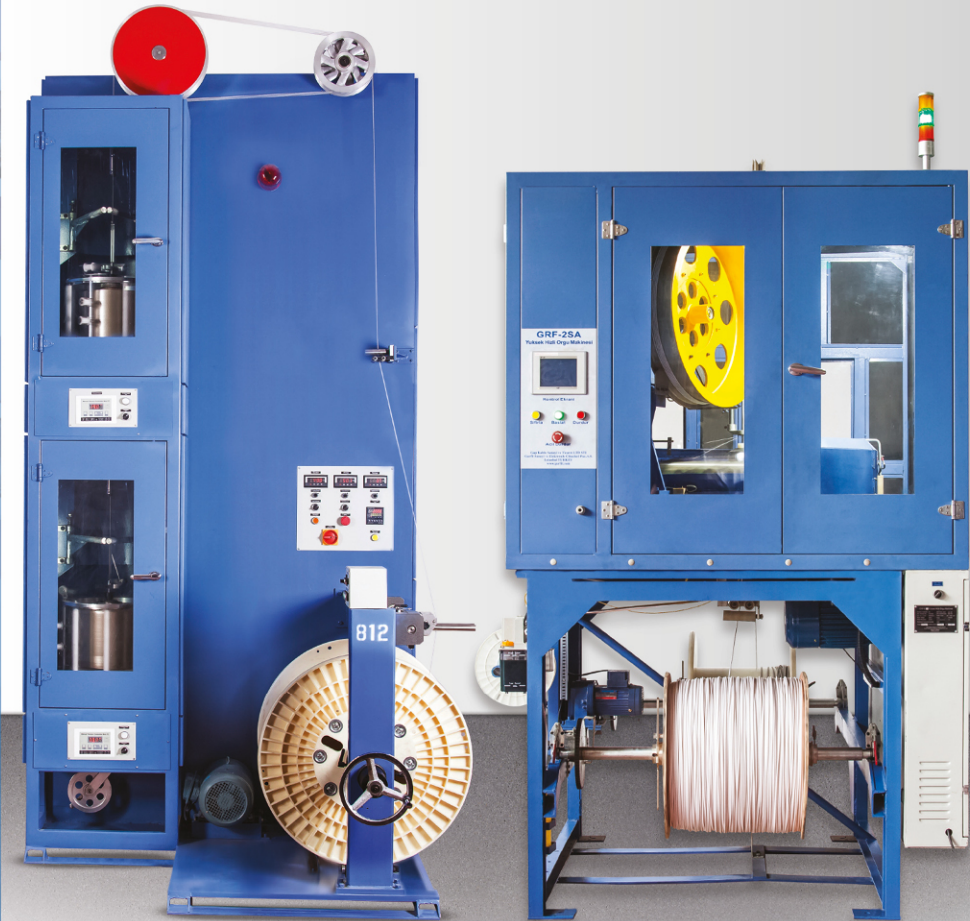
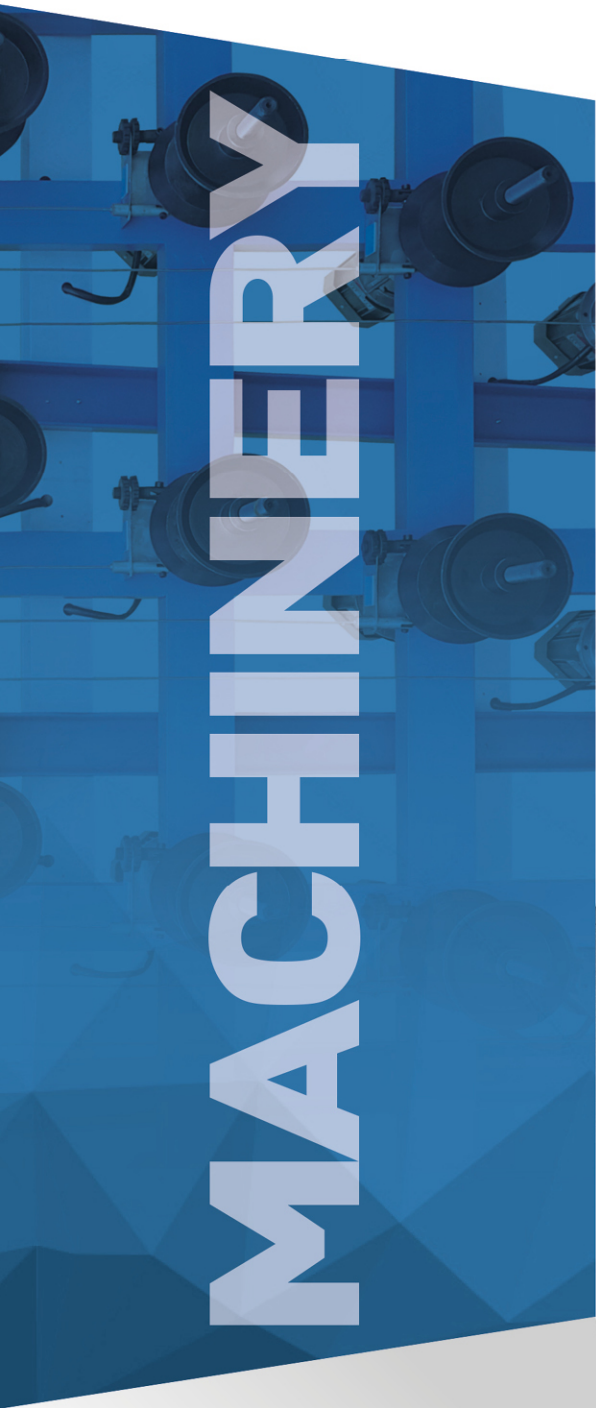
CAT 6 - SEMI FINISHED cable with CCA or CU central conductor for CATV – Cable TV , CCTV - Close Circuit TeleVision, DBS - Direct Broadcasting Satellite, LAN cable

### Semi-finished CAT 6 cable consists of:

- Four unshielded twisted pair (UTP) of Copper Clad Aluminum wire (CCA) or Copper wire (CU)
- Separator
- Ripcord yarn







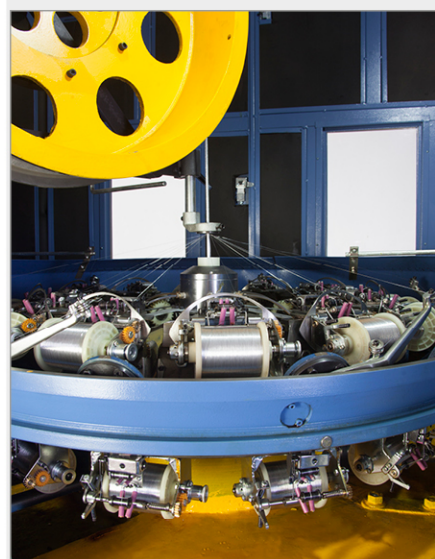
## HIGH SPEED VERTICAL CABLE AND TUBE BRAIDING MACHINES

GURFIL High Speed Vertical Braiding Machines have been tested and accepted by most of Global cable manufacturers with rich menu options, quality and stable braiding, wide range of usage and superior security. With the help of a Touch Screen any malfunction on the machine can be seen on the screen and interfered instantly.

### Properties:

- PLC touch screen menu available in all languages
- Auto pitch - Servo control optional
- High sound insulation
- Superior operator security
- CE Certificated model available
- 16 and 24 carrier option
- Copper, Aluminium and Steel Braiding
- Automatic fault indication system
- Automatic lubrication system
- Synchronised Pay-off and Take-up insatalled on the machine

Binding	2over2	2over2
Braiding direction	Vertial	Vertical
Bobbin numbers	16 (8,8)	24 (12,12)
Bobbin size	75 /22 /70 mm outer dia./ inner dia. /inner width	75 /22 /70 mm outer dia./ inner dia./inner width
Bobbin speed	Max. 150 r.p.m.	Max. 100 r.p.m.
Braiding pitch	6.4-65mm	13.3 - 134.5mm
Max. Braiding diameter	16mm	24mm
Max. Produce speed	585 m/hour	800m/hour
Pay-off and Take-up size	800mm	800mm
Main motor power	1.5 Kw	3 Kw
Configuration size	1200x1390x2350mm	1500x1800x2650mm





# MACHINERY

## HIGH SPEED HEAVY CARRIER VERTICAL BRAIDING MACHINES

GURFIL High Speed Heavy Carrier Vertical Braiding Machines are customized for special cables, pipe, natural gas connection pipes were recognized and are used admirably by leading companies of pipe, natural gas and cable sectors by means of wide areas of usage, superior safety, speed capacity, advanced menu option.

With the help of a touch screen any malfunction on the machine can be seen on the screen and interfered instantly.

### Properties:

- PLC touch screen menu available in all languages
- CE Certificated model available
- Auto pitch - Servo control optional
- Automatic lubrication system
- Top level sound isolation
- Cutting edge system safety environment for operator safety
- 16 and 24 carrier option
- Steel wire and copper wire
- Automatic error warning system



Binding	2over2	2over2
Braiding Direction	Vertical	Vertical
Bobbin Numbers	16 (8,8)	24 (12,12)
Bobbin Size	110 /45 /100mm outer dia. / inner dia. / inner width	110 /45 /100mm outer dia. / inner dia. / inner width
Bobbin Speed	Max. 70 rpm	Max. 60 rpm
Braiding Pitch	18.4mm - 185.9mm	27 - 270mm
Max. Braiding Dia.	30mm	45mm
Max. Thread Dia.	0.40mm	0.40mm
Main Motor Power	2.9 Kw	5.7 Kw
Configuration Size	1580x1350x2250mm	1780x1850x2600mm



## HIGH SPEED HORIZONTAL CABLE AND TUBE BRAIDING MACHINES

GURFIL High Speed Horizontal Brading Machines are greatly accepted by cable and hose manufacturers because of high bobbin speed, high precision, high stability, low power consumption, and ease of operation and maintenance.

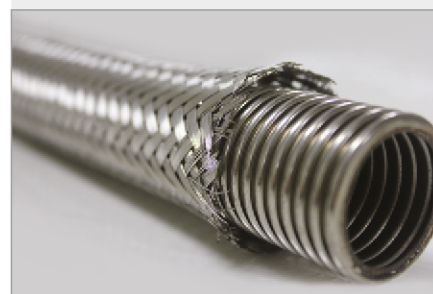
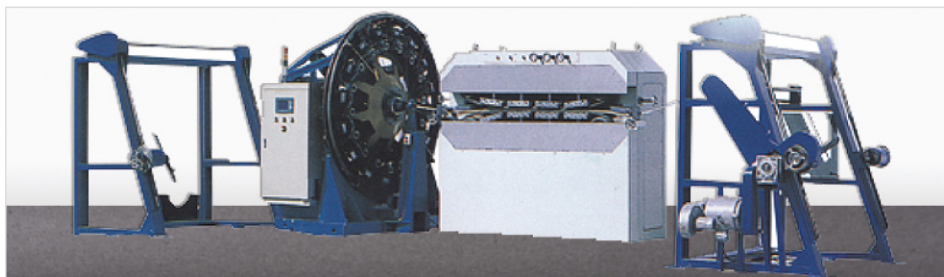
With the help of a Touch Screen any malfunction on the machine can be seen on the screen and interfered instantly.

### Horizontal machines divide in 4 categories:

- 24 carrier machines
- 32 carrier machines
- 36 carrier machines
- 48 carrier machines

### Properties:

- PLC touch screen menu available in all languages
- Stepless speed adjusting
- Automatic tension adjusting
- CE Certificated model available
- Automatic fault indication system
- Security frame with sound isolation
- Automatic lubricating system
- Catterpillar synchronized with the main machine



BINDING	2over2	2over2	2over2	2over2
Braiding direction	Horizontal	Horizontal	Horizontal	Horizontal
Bobbin numbers	24(12,12)	32(16,16)	36(18,18)	48(24,24)
Bobbin size	110/45/55 outer dia. /inner dia. /inner width	110/45/55 outer dia. /inner dia. /inner width	110 /45 /55 outer dia. /inner dia. /inner width	110 /45/55 outer dia. /inner dia. /inner width
Bobbin speed	Max 45 r.p.m.	Max 32 r.p.m.	Max 30 r.p.m.	Max 22 r.p.m.
Braiding pitch	27 - 270mm	27 - 270mm	27 - 270mm	35-350 mm
Max. Braiding diameter	60mm	75mm	90mm	120 mm
Max. Produce speed	729 m/hour	518 m/hour	453 m/hour	241 m/hour
Max. Braiding thread dia.	0.40mm	0.40mm	0.40mm	0.40 mm
Main motor power	5,5 Kw	5,5 Kw	7,5 Kw	11 Kw
Configuration size	1700x1500x1800 mm	1720x1830x2140 mm	2000x2100x2340 mm	2290x2540x2870 mm

# MACHINERY

## SPECIAL BRAIDING MACHINES

Gurfil offers wide range of special braiding machines with many different configuration and specification options for different industries.

Products that can be produced by Gurfil braiding machines are as follows

- Shoelace
- Rope/Cord
- Hose/Pipe
- Fishing Line
- Sleeve
- Wire /Cable
- Fancy and decorative textile products

### **Forms that can be produced by Gurfil Special Braiding Machines:**

Round, Square, Flat, Zigzag, Elastic, Twisted

### **Materials that can be used for braiding:**

Metallic wires, Fiber Yarns (Cotton, Fiberglass, Polyester and Carbon), Elastic material

### **Spindle quantity:**

From 3 spindle up to 140 spindle





# MACHINERY

## FULLY AUTOMATIC WIRE WINDING MACHINE

Gurfil Fully Automatic Wire Winding Machine is specially designed for winding wires on to braiding machine bobbins automatically.

All actions of bobbin loading, bobbin clamping, winding, thrum cutting, thread slubbing, thread cutting and bobbin unloading is controlled by PLC automatically.

Number of bobbin	4
Width of bobbin	70-100mm or customer specified
Hole of bobbin	10-33mm or customer specified
Max. speed	3000 r.p.m.
Max. number of wire	10
Wire diameter	0.08-0.25mm
Pitch	0.1-2mm
Main motor power	4Kw
Motor of traverse	400W servo motor

Empty bobbin capacity: 4 lines x16 pcs.

Full bobbin capacity : 8 lines x 4 pcs.

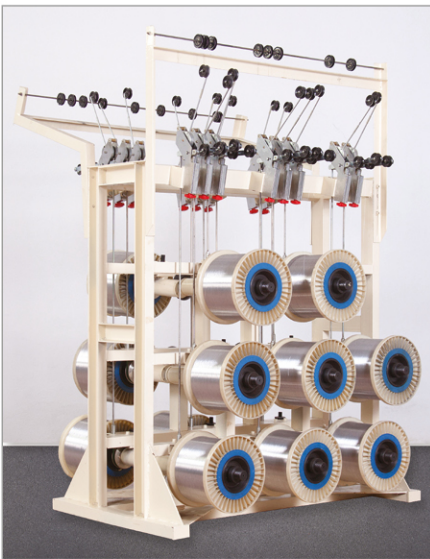




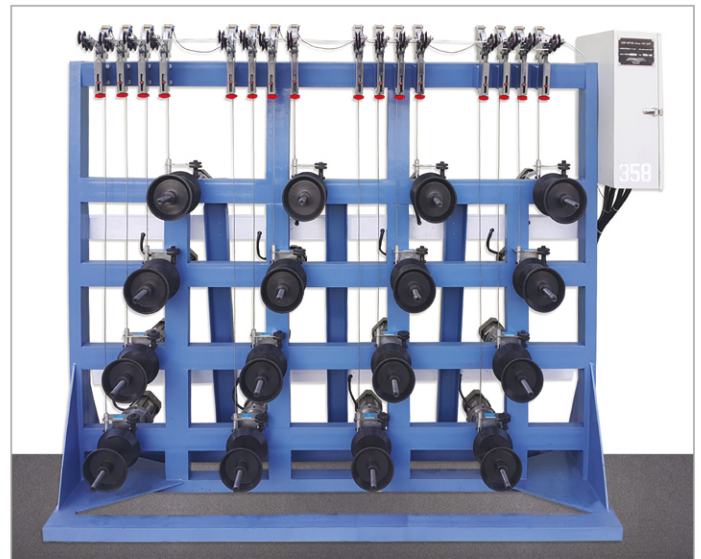
# MACHINERY

## WIRE PAY-OFF AND WINDER

Tensio Controlled Wire Pay-Off



Motorised Tension Controlled Wire Pay-Off

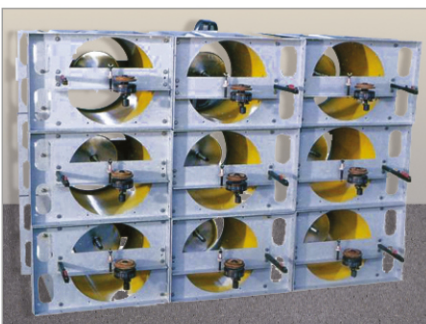


2 Head and 3 Head Semi-Automatic Wire Winder



	Aluminum / Copper wire	Steel Wire
Winder Head Quantity	2 – 3 Head	2 – 3 Head
Maximum Speed	2800 R.P.M.	2800 R.P.M.
Wire quantity	1-10	1-10
Wire diameter range	0.05mm – 0.20 mm	0.10mm – 0.40 mm
Motor Power	0.55 KW	0.75 KW

Box Type - Magnetic Controlled Pay Off



\*Pay-off can be produced requested head quantity and bobbin size.

# MACHINERY

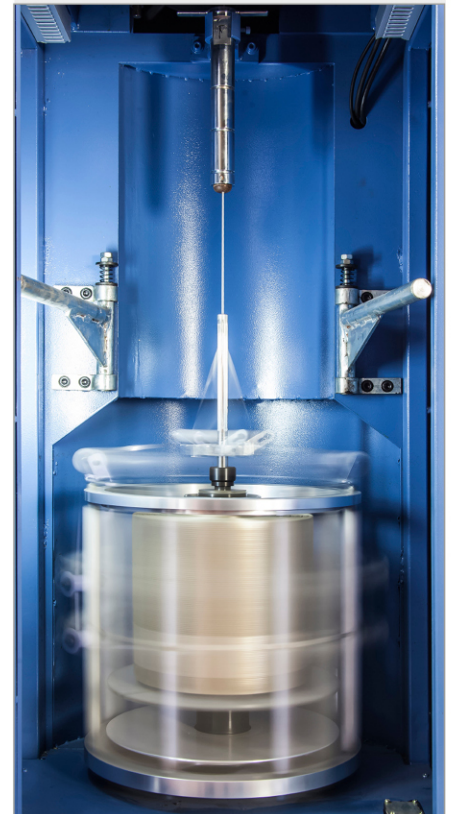
## MICA TAPING MACHINES

GURFIL Mica Taping Machines are divided into two categories;

- Vertical Spool and Pad Head Mica Taping Machine
- Vertical Pad Head Mica Taping Machine

### Properties

- 1, 2 and 3 taping head option
- Automatic Tension Controller
- Pay-Off and Take-Up
- CE Certificated model available
- High speed
- Mechanical, Manual and Automatic operating option
- Can operate with , Mica Tape, Aluminum Foil, PET Film
- Head rotations: right-right, right left, left-left, left-right





# MACHINERY



## INDUCTION PRE-HEATERS

GURFIL Induction Pre-heater heats the copper wire using an induction heating technique before it is extruded with insulation. The quality of the extruded insulation is improved remarkably by pre-heating the copper wire, so Pre-heater is necessary equipment for manufacturing high quality wire and cable.

### Properties:

- Damage to the wire surface by electric spark is minimized
- Suitable to use with high speed extrusion lines
- No stretching on wire due to minimum resistance on wire during machine work
- The power output changes automatically with the variation of the line speed so that the preheating temperature remains the same at different line speed
- High quality material and long service life
- Simple construction and high reliability

TYPE	GRF-12000	GRF-12001	GRF-12250	GRF-12251	GRF-12380	GRF-11000	GRF-11001
KIND OF WIRE	MONO WIRE	MONO WIRE	MONO WIRE	MONO WIRE	ALUM WIRE& COAX CABLE	SINGLE WIRE	SINGLE WIRE
Main guide pulley dia.(mm)	180	180	250	250	380	250	250
Wire dia. (mm)	0.3-1.0	0.3-1.0	0.3-2.5	0.3-2.5	2.0-7.0	0.5-3.0	0.5-3.0
Line speed (m/min)	50-2000	30-1000	10-500	10-250	5-100	0-100	0-60
Preheating temperatures (C°)	0-120	0-200	0-120	0-200	0-150	0-120	0-150
Max. Power (kw)	8	8	8	8	8	10	10
Height of the wire in and out (mm)	1000	1000	1000	1000	1000	1000	1000
Outline (length x width x height)	500x415x1400		252x420x1290		620x410x1290	525x420x1290	



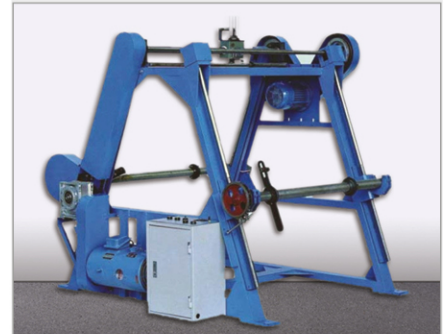
## PAY-OFF AND TAKE-UP

Desired size of Pay-Off and Take-Up for external use.

- Single Pay-off,
- Single Take-up,
- Two-in-one (pay-off and take-up together) options.

### Available reel size:

1000mm - 1250mm - 1600mm - 1800mm - 2000mm - 2200 mm



## AIR WIPERS

In the extrusion of soft materials like insulated cables and wires, Air Wipers are necessary for the proper operation of in-line printers and spark testers to remove water droplets or films which otherwise would cause print failure or false fault counts.

Air Wipers protect process instrumentation, such as spark testers or diameter gauges, from damage by water carried into or sprayed onto the equipment.

Gürfil Air Wipers achieve maximum wiping action with modest air consumption because the wipe orifice can be easily set to the optimum diameter required with enough clearance to allow for whip and vibration.

Available dimensions : 6 - 8 - 10 - 15- 25 - 35 mm.



# MACHINERY



## ALUMINIUM AND STEEL COPOLYMER WELDING MACHINE

Gurfil Spot Welding Machine line consists of 3 units

- Pay-off (optional single or double head)
- Tape storage box
- Metal tape spot welder

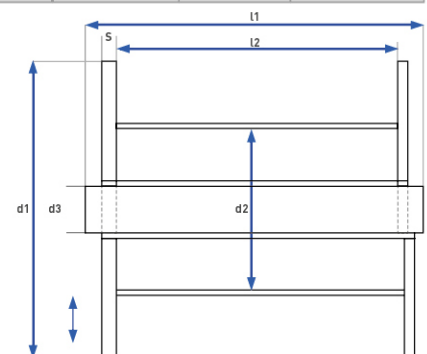
Mainly used for telecommunication and medium voltage cable production. During the production of telecommunication cable aluminium or steel tape joints can be welded with help of Gurfil Spot Welding line without interrupting the production process.

Gurfil Spot Welding line is the most common and least complicated way of aluminium and steel tape welding system that can be applied during the cable production without interrupting the production.

MATERIAL	THICKNESS	TIME SCALE	VOLTAGE GRADE	WELDING TIP MATERIAL
Aluminium	0.1 mm	2 sec.	1 or 2	Copper
	0.2 mm	2 or 2.5 sec.	2 or 3	
	0.3-0.35 mm	2-2.5 sec.	2 or 3	
Steel	0.1 mm	2 sec.	1	Copper
	0.2 mm	2 sec.	1 or 2	
	0.3-0.8 mm	2 sec.	1 or 2	

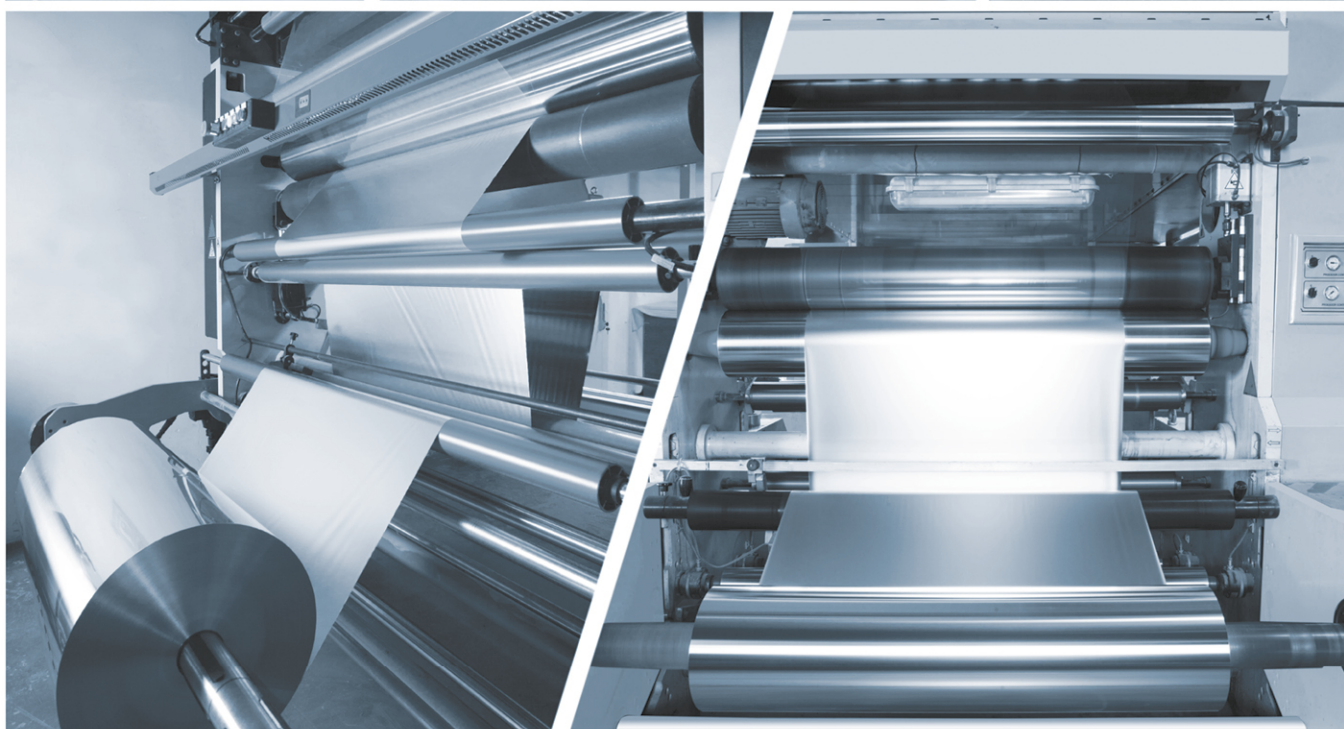
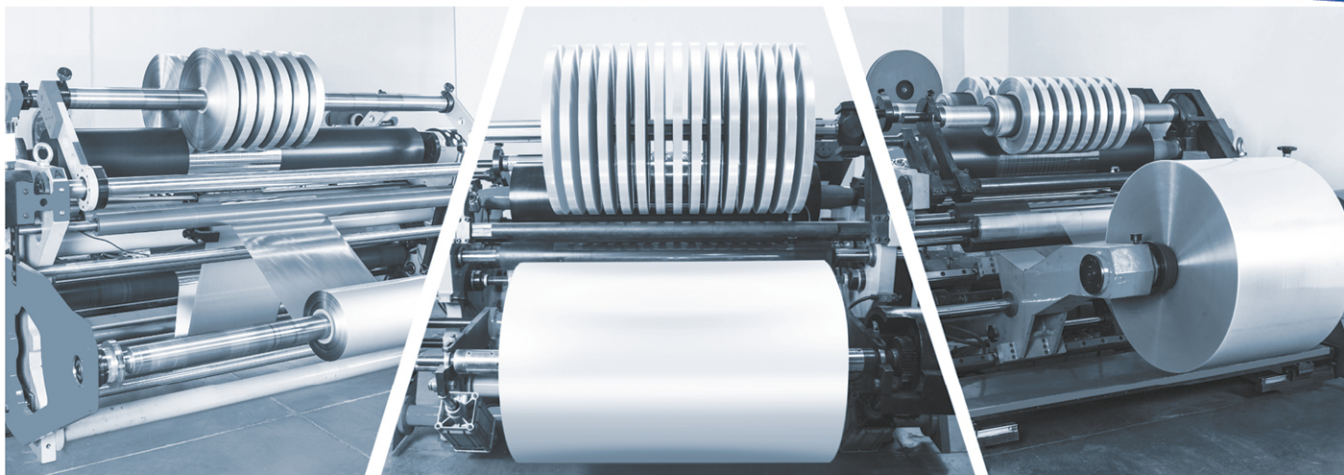
## ABS SPOOL

	d1	d2	d3	l1	l2	S
DIN 500	500	250	56	375	315	20
DIN 630	630	315	56	475	400	25
DIN 800	800	400	80	600	500	35
DIN 1000	1000	507,5	80	750	630	35





# PRODUCTION





**GÜR**  
FOIL - FILM - TAPE

**FIL**®



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