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### TT ENDÜSTRİYEL AMBALAJ MAKİNA SAN. ve TİC. A.Ş.

Factory Address: Velimese Organize Sanayi Bolgesi Mahallesi 227. Sok.,3/1 Ergene TEKIRDAG / TURKEY Tel: +90 282 674 33 23 Fax: +90 282 674 33 25

### **CO-STRAP Verpackungslosungen GmbH**

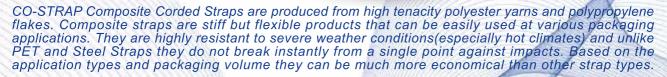
Company Address: 91541 Rothendurg ob der Tauber, Germany Warehouse Address: Marie-Curie-Str. 5, 63526 Erlensee, Germany







Printed Composite Straps **Ultraflex Quality** Strapping Kits Colored Corded Straps



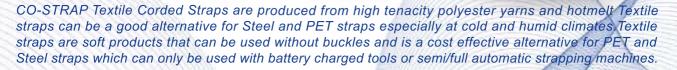
- High Strength Shock Absorbent
- Does not get loose (High retain tension) Highly Elastic and Flexible
- No sharp edges that could damage your products
- Does not damage cargo Resistant to Severe Weather Conditions and UV
- Cost Effective
- Light-Weight
- Rust-proof, doesn't rust or corrode Resistant to chemicals
- Fast and easy to use
- Safe Usage
- Flex / Ultraflex Composite Straps can be feed easily through the buckle
- Printing with company name and/or logo on the straps is available
- Germanischer Llyod approved

	POLYESTER COMPOSITE STRAPS							
		Vidth (mm)	Linear Break Strength (daN)	Coil Length* (m)	Core Diameter (mm)			
I	LIGHT APPLICATION							
	CS13L (CC-40/2)	13	240	1100	200			
ì	CS16L (CC-50/2)	16	310	850	200			
Į	CS19L (CC-60/2)	19	330FR LLOVA	600	200			
	CS25L	25	440	500	200			
	STANDARD APPLICATION		340 450 510	700				
	CS13ST (CC-40)	13	340	1100	200			
	CS16ST (CC-50)	16	450	850	200			
	CS19ST (CC-60)	19	510	600	200			
	CS25ST	25	690	400 / 500	200			
	STRONG APPLICATION							
	CS16STR (CC-55)	16	540	750 / 600	200			
	CS19STR (CC-65)	19	600	650 / 500	200			
	CS25STR (CC-85)	25	800	500	200			
	CS32STR (CC-105/6L)	32	1150	300	406/200			
	CS34STR (CC-105/6)	34	1400	400 / 300	406/200			
	EXTRA STRONG APPLICATION							
	CS19ESTR - ULTRAFLEX (CC-69)	19	850	500	406/200			
	CS25ESTR - ULTRAFLEX (CC-86UF)	25	1050	500 / 450	406/200			
	CS26ESTR - ULTRAFLEX (CC-89UF)	26	1350	400	406/200			
	CS32ESTR - ULTRAFLEX (CC-105UF)	32	1650	300	406/200			
	CS40ESTR - ULTRAFLEX (CC-150UF)	40	2450	220	406/200			





Printed Textile Straps
Bale Press Strapping
Dispenser Box Set
Strapping Kits
Colored Corded Straps



- High Strength
- Shock Absorbent
- Does not get loose (High retain tension)
- Highly Elastic and Flexible
- No sharp edges that could damage your products
- Does not damage cargo
- Resistant to Severe Weather Conditions and UV
- Cost Effective
- Light-Weight
- Fast and east to use
- Soft and can be used without buckle
- Printing with company name and/or logo on the straps is available
- Germanischer Llyod approved

POLYESTER TEX	POLYESTER TEXTILE (HOTMELT) STRAPS						
CO-STRAP Product Code	Width (mm)	Linear Break Strength (daN)	Coil Length* (m)	Core Diameter (mm)			
BALE PRESS WG9STBL (30WG BL) WG13STBL (40WG BL) WG16STBL (50WG BL)	9 13 16	280 380 450	250 / 500 250 / 350 / 500 400 / 425	62 62 62			
LIGHT APPLICATION WG9L (30WGL) WG13L (40WGL) WG16L (50WGL) WG19L (60WGL)	9 13 16 19	230 330 380 500	1800 1500 / 1100 1200 / 850 600	76 76 76 76 76			
STANDARD APPLICATION WG9ST (30WG) WG13ST (40WG) WG16ST (50WG) WG19ST (60WG)	9 13 16 19	280 380 450 550	1500 1100 850 600	76 76 76 76			
STRONG APPLICATION WG13STR (45WG) WG16STR (55WG) WG19STR (65WG) WG25STR (85WG) WG30STR (95WG) WG30STR (105 or 105/4WG)	13 16 19 25 30 35	550 600 725 950 1200 1400	850 600 500 500 150 150	76 76 76 76 76 76 76			
EXTRA STRONG APPLICATION WG19ESTR (69WG) WG25ESTR (86WG) WG38ESTR (150WG)	19 25 38	950 1250 2000	400 400 100	76 76 76			

<sup>\*:</sup> Different coil lengths are available upon request

<sup>\*:</sup> Printed straps are available upon request

# Woven Straps

Woven straps is an alternative to steel banding. Woven cord strapping has similar physical properties with textile straps. They have to be used with phosphated buckle.



Woven Straps					
CO-STRAP Product Code	Width (mm)	Linear Break Strength (daN)	Coil Length* (m)	Core Diameter (mm)	
Standard Application					
WV13ST	13	360	1100	76	
WV16ST	16	500	850	76	
WV19ST	19	580	600	76	
Strong Application					
WV13STR	13	CO-STRAP	850	76	
WV16STR	16	600	600	76	
WV19STR	19	750	500	76	
WV25STR	25	1000	500	76	
Extra Strong Application					
WV19ESTR	19	1100	400/500	76	
WV19ESTX	19	1225	400/500	76	
WV25ESTR	25	1400	300	76	
WV32ESTR	32	1500	300	76	

<sup>\*:</sup> Different coil lenghts are available upon request







TT Industrial Packaging Company supplies all kinds of Lashing products and equipment as well as consultancy services on appropriate application ways with the help of its experts. Lashing products are designed to bear optimized specifications for cargo securing on land, marine and airline transportation, flat-racks, railcars & ships.

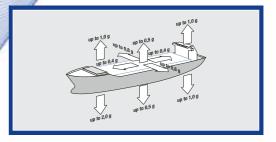
Cost effective • Re-stretchable • No product damage • Shock absorbent • Weather resistant • High retained tension • Light-weight portable • Does not rust out



Lashing					
CO-STRAP Product Code	Width (mm)	Linear Break Strength (daN)	Coil Length* (m)		
COLASH 100	25	2200	400		
COLASH 105	32	2000	250		
COLASH 105 S	32	2300	250		
COLASH 150-AAR	38	0-STRAP	200		
COLASH 200-AAR	40	5000	200		
COLASH 500	50	5000	150		
COLABH 600	50	6000	150		
COLASH 750-AAR	50	7500	150		











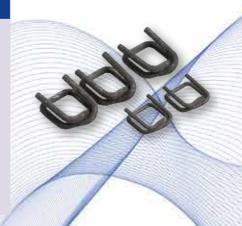
## Strapping Buckles:

The thickness of the strapping buckles range from 8 mm to 40 mm and they are convenient to use in all types of strapping.

- Galvanized Buckles
- Phosphated Buckles



	Galvanized Wire Buckles						
	CO-STRAP Product Code	Width (mm)	Wire Ø	Quantity Per Box (pcs)			
3	COB4G13	13	3.0	1000			
	COB4G13-STD	13	3.3	1000			
	COB5G16	16	3.3	1000			
	COB5G16-HD	16	3.5	1000			
	COB6G19	19	3.5	1000			
	COB6G19-HD	19	CO-STR40P	1000			
	COB8G25	25	5.0	500			
	COB8G25-HD	25	6.0	400			
	COB10G32	32	7.0	250			
	COB12G40	38	7.0	200			





Phosphated Wire Buckles						
Width (mm)	Wire Ø	Quantity Per Box (pcs)				
13	3.0	1000				
13	3.3	1000				
16	3.3	1000				
16	3.5	1000				
19	3.5	1000				
19	CO-STR40P	1000				
25	5.0	500				
25	6.0	400				
32	7.0	250				
38	7.0	200				
	Width (mm)  13  13  16  16  19  19  25  25  32	Width (mm)  13 3.0 13 3.3 16 3.3 16 3.5 19 3.5 19 25 5.0 25 6.0 32 7.0				



## CO-DISP101 Hotmelt and Woven Strap Dispenser

Core size(mm) : 76
Max. strap width(mm) : 38
Max. face coil(mm) : 200
Coil winding : O

· Wheel type : No wheel : Semi

\*\*Coil winding : R means Ribbon coil.

O means Oscillated/Mill Wound coil.

## CO-DISP102 Hotmelt and Woven Strap Dispenser

Core size(mm) : 76
Max. strap width(mm) : 38
Max. face coil(mm) : 260
Coil winding : O
Wheel type : 6" Plastic
Assembled : Semi

\*\*Coil winding : R means Ribbon coil.

O means Oscillated/Mill Wound coil.

# CO-DISP103 UNI Universal PET & PP & Composite Strap Dispenser

Core size(mm) : 150, 200, 280 and 400

Max. strap width(mm)
Max. face coil(mm)
Disc outer dia (mm)
Coil winding
65
330
Max. 600
C

Wheel type : 6" Rubber with steel center

Assembled : Semi

· \*\*Coil winding : R means Ribbon coil.

O means Oscillated/Mill Wound coil.

# CO-DISP104 Composite Strap and PP Strap Dispenser

Core size(mm) : 200

Max. strap width(mm) : 40

Max. face coil(mm) : 300

Disc outer dia (mm) : Max. 450

Coil winding : 0

Wheel type : 6" Plastic

Assembled : Semi

\*\*Coil winding : R means Ribbon coil.

O means Oscillated/Mill Wound coil.

#### CO-DISP105-UNI Universal Composite Strap, PET Strap, Steel Strap and PP Strap Dispenser

Core size(mm) : 400
Max. strap width(mm) : 32
Max. face coil(mm) : 260
Disc outer dia (mm) : Max. 650
Coil winding : R/O

· Wheel type : 8" Rubber with steel center

· Assembled : Semi

\*\*Coil winding : R means Ribbon coil.

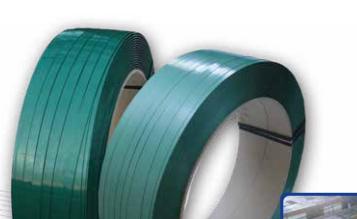
O means Oscillated/Mill Wound coil.





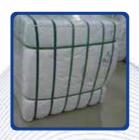














PET Straps can be used in fully automatic pallet strapping machines during the packaging of products witch require medium and high strength strapping. They can also be used by pneumatic strapping machines or battery powered strapping machines.

High breaking strength • Shock absorbent • Long term Elasticity • Resistant to severe weather condiditions • No cargo damage • Don't get loose • Safe and fast usage

PET Straps

CO-STRAP Product Type	Size (mm)	Linear Break Strength (daN)	Length (m)	Color	Surface
POLYESTER (PET) STRAP	12x0.70	340	2500	Green	EMBOSSED
POLYESTER (PET) STRAP	15x0.70	380	1400	Green	EMBOSSED
POLYESTER (PET) STRAP	15.50x0.90	530	1500	Green	EMBOSSED
POLYESTER (PET) STRAP	16x0.60	345	1700	Green	EMBOSSED
POLYESTER (PET) STRAP	16x0.70	470	1550	Green	EMBOSSED
POLYESTER (PET) STRAP	16x0.70	470	1750	Green	EMBOSSED
POLYESTER (PET) STRAP	19x0.80	550	1200	Green	EMBOSSED
POLYESTER (PET) STRAP	19x1.00	700	1000	Green	EMBOSSED
POLYESTER (PET) STRAP	12x0.60	280	2200	Green	SMOOTH
POLYESTER (PET) STRAP	15.50x0.90	630	1500	Green	SMOOTH
POLYESTER (PET) STRAP	19x1.00	840	1000	Green	SMOOTH
POLYESTER (PET) STRAP	19x1.27	1050	730	Green	SMOOTH
POLYESTER (PET) STRAP	19x1.27	1050	2200	Green	SMOOTH
POLYESTER (PET) STRAP-ECO	12x0.60	220	2200	Green	EMBOSSED











PP Straps offer one of the most cost effective alternatives for light weight applications with low tensile strength. They can be used with buckles and welding system.

Safe and quick • No cargo damage • Cost effective • Medium resistance to severe weather conditions

# PP Straps

Туре	Color	Size (mm)	Core (mm)	Coil Length (m)
AUTOMATIC	WHITE	8x0.60	200x150	4000
AUTOMATIC	WHITE	12x0.60	200x150	3000
AUTOMATIC	WHITE	12x0.80	400x150	2000
AUTOMATIC	WHITE	8x0.60	200x150	4000
AUTOMATIC	WHITE	10x0.60	200x150	3500
AUTOMATIC	WHITE	12x0.60	200x150	3000
AUTOMATIC	WHITE	12x0.80	400x150	2000
MANUAL	WHITE	16x0.80	400x150	1500
AUTOMATIC	BLACK	10x0.60	200x150	3500
AUTOMATIC	BLACK	12x0.60	200x150	3000
MANUAL	BLACK	16x0.80	400x150	1500
	AUTOMATIC AUTOMATIC AUTOMATIC AUTOMATIC AUTOMATIC AUTOMATIC AUTOMATIC AUTOMATIC MANUAL AUTOMATIC AUTOMATIC	AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE AUTOMATIC WHITE MANUAL WHITE AUTOMATIC BLACK AUTOMATIC BLACK	AUTOMATIC WHITE 8x0.60 AUTOMATIC WHITE 12x0.60 AUTOMATIC WHITE 12x0.80 AUTOMATIC WHITE 8x0.60 AUTOMATIC WHITE 10x0.60 AUTOMATIC WHITE 12x0.60 AUTOMATIC WHITE 12x0.60 AUTOMATIC WHITE 12x0.80 MANUAL WHITE 16x0.80 AUTOMATIC BLACK 10x0.60 AUTOMATIC BLACK 12x0.60	AUTOMATIC WHITE 8x0.60 200x150 AUTOMATIC WHITE 12x0.60 200x150 AUTOMATIC WHITE 12x0.80 400x150 AUTOMATIC WHITE 8x0.60 200x150 AUTOMATIC WHITE 10x0.60 200x150 AUTOMATIC WHITE 12x0.60 200x150 AUTOMATIC WHITE 12x0.60 200x150 AUTOMATIC WHITE 12x0.80 400x150 MANUAL WHITE 16x0.80 400x150 AUTOMATIC BLACK 10x0.60 200x150 AUTOMATIC BLACK 10x0.60 200x150





Dunnage Bags provide the most cost-effective solutions to secure and stabilize the cargo inside the container, railway wagon or truck.

Dunnage bags ensure you that freight arrives at the final destination without any damage.

During long sea and railway shipments, it is necessary to fix the pallets in the container to prevent rubbing with each other, to eliminate the risk of overturning, etc.





There are two kinds of Dunnage bags: Polypropylene Woven and Kraft Paper.

The sizes and dimensions vary according to the weight of the pallets, the dimensions and the internal dimensions of the container.

At the same time, there are classifications which are called Levels in terms of quality (strength) of Dunnage Bags.



- Kraft Paper Dunnage Bags
- Polypropylene Woven Dunnage Bags
- Inflation Devices

# ECO LINE LEVEL 1, LEVEL 2, LEVEL 3, LEVEL 4, LEVEL 5, DUNNAGE AIR BAG DIMENSIONS

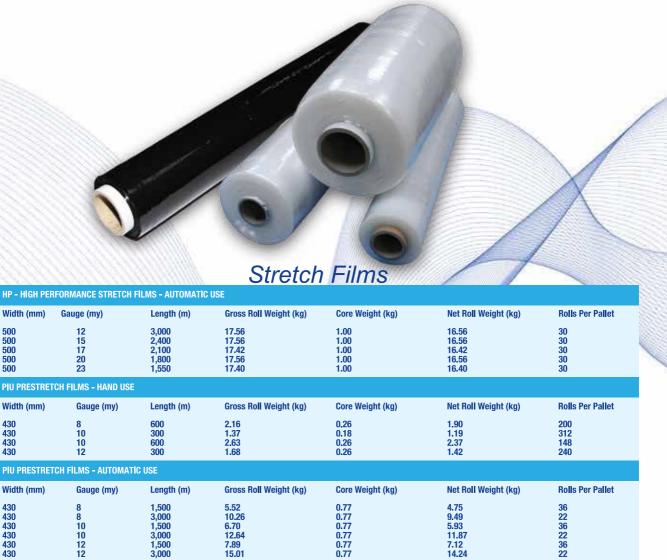
Dimension (inch)	Dimension (cm)
24" x 36"	61 x 91
36" x 48"	91 x 122
36" x 72"	91 x 183
48" x 72"	122 x 183
48" x 84"	122 x 213

\*: Other Dimensions are also avaible upon request



Prestretch Films reduce the amount of material required by as much as 50% for greater savings. A reel of Prestretch Film bobbins weight up to 70% less than a traditional 300 meters manual reel and makes packaging easier. More protection for delicate products thanks to a more delicate application of the film on pallet.

Economic • More light • More output • More strength • More protection • More resistance to impact and tearing • More safety • Reduced cost for waste material





# Strapping Tools And Accessories



**Manual Strapping Tools:** These are appropriate for various kinds of usages and offered in two types as light/medium and heavy duty applications.



**Battery Charged Strapping Tools:** The battery charged strapping tools used in PET and PP strapping applications are user friendly, safe and have high tensioning capacity.



**Plastic Edge Protectors:** They are suitable for different types of strapping and can be produced in custom colors upon request.

