

# Sal-Tech Easy Packaging

## Straps, Buckles and Protectors for Strapping



## Steel Strap

The primary item used in strapping. Sal-Tech Easy Packaging offer you a variety of strapping bands used in wide variety of applications. The strongest strapping material. The use of metal as a strapping medium dates back to the ancient times. With the advent of steel, it becomes the material of choice for heavy duty strapping.

### Choose between:

Strap Width: 13 – 16 – 19 - 25 - 38mm  
 Thickness: 0,5 – 0,6 – 0,8 or special 0,4 – 0,6 – 1,0mm  
 Surface: Blank – Black Painted – Bluing (Black oxide) – Zinc coated – Stainless Steel  
 Coil Type: Singel ring – Continuous ring  
 Tensile strength: Minimum 850Mpa or Up to 900Mpa or 950Mpa on demand

Sold per kg as price basis.

Single ring weigh between 22 and 31 kgs  
 Continuous/Oscillating rings weigh 50kg

Not all variations are on stock.



### Steel Strap Specifications

Width	Thickness	Surface	Coil Type	Coil weight	Item No.
13	0.5	Blank	Single Ring	22kg	57135010
		Black Painted			57135011
		Bluing (Black oxide)			57135012
		Zinc coated			57135013
		Stainless Steel			57135014
	0.5	Black Painted	Continuous Ring	50kg	57135111
16	0.5	Blank	Single Ring	26kg	57165010
		Black Painted			57165011
		Bluing (Black oxide)			57165012
		Zinc coated			57165013
		Stainless Steel			57165014
	0.5	Black Painted	Continuous Ring	50kg	57165111
19	0.6	Blank	Single Ring	31kg	57196010
	0.8	Blank			57198010
	0.6	Black Painted	Continuous Ring	50kg	57196111
25	0.8	Blank	Single Ring	38kg	57258010
	0.8	Black Painted			57258011
	0.8	Black Painted	Continuous Ring	50kg	57258111
38	0.8	Blank	Single Ring	50kg	57388010
	0.8	Black Painted			57388011
	0.8	Black Painted	Continuous Ring	50kg	57388111

Strap wagons for steel strap,

check these solutions:



## Polypropylene (PP) Strap

STEP Polypropylene (PP) Straps are good for single standing machines in your production space in direct contact with the operator, easy applications and cheap.

PP strap is widely used in packaging industry, it has good strength and welding capacities. PP straps can be manufactured in many different width, thickness and colors and can be wound on many different coil dimensions. We have many types on stock. Ask us for more available specifications.



### Strap Specifications

### Roll Distribution

Width	Thickness	Strength (N)	Color	Core Ø	Core width	Meters /roll	Rolls/crt	30 carton 1 pallet	Item No.
5	0,40	450	White	150	160	6000	2	<b>Request price</b>	51540330
			Black	200	190	8000	2		51540510
	0,45	600	White	200	190	7000	2		51540560
			Black	200	190	7000	2		51545510
6	0,55	750	White	280	190	4200	2		51545560
			Black	200	190	5000	2		51655510
9	0,55	1200	White	200	190	3000	2		51655560
			Black	200	190	3000	2		51665660
			Blue	200	190	3000	2		51955510
12	0,55	1350	White	200	190	3000	2		51955520
			Black	200	190	3000	2		51955560
			Blue	200	190	3000	2		51255510
	0,55	1350	White	280	190	2500	2		51255520
			Black	280	190	2500	2		51255560
			Blue	280	190	2500	2		51255610
	15,5	0,60	1900	White	406	150	3000		1
				Black	406	150	3000	1	51255660
0,65		1900	White	406	150	2000	1	51263510	
			Black	406	150	2000	1	51263660	
15,5	0,65	1900	White	200	190	2000	2	51263710	
			Black	280	190	1500	2	51273710	
15,5	0,65	1900	White	200	190	2000	2	51360510	
			Black	280	190	1500	2	51365610	

## PP Straps in Box Dispensers

12 x 0.45mm Black	51250910	Center and side delivery of strap	1000m
15.5 x 0.6mm Black	51360910		1000m



## Woven Polyester/Polypropylen (WG) Strap

Also known as corded or woven strap. A type of strapping band that can be reusable to a certain degree. Commonly used together with a metal buckle which makes it adjustable.

WG Strap using metal buckles for tensioning and way of sealing



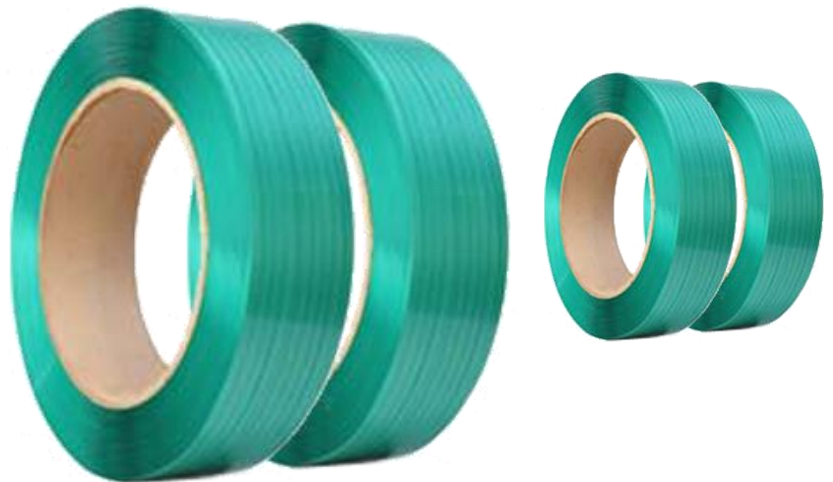
WG Strap Specifications								Item Number
Strap Width	Name	Strength N	Color	Core Ø	Coil Width	Meters/Coil	Coils / Carton	
9	WG30	2750	White	Ø76	150	250	8	53090250
						1500	3	53091500
13	WG40	3750				250	8	53130250
						1100	3	53131100
16	WG55	6000				850	3	53160850
19	WG65	7500				500	3	53190500
25	WG85	12500				400	3	53250400

Not all types are permanently on stock

## Polyester (PET) Strap

The strongest plastic composite used in strapping. A viable alternative to steel straps primarily due to its strength and cheaper prices.

It is ideal for pallet strappings.



PET Strap Specifications								Item Number
Width	Strap Thickness	Strength N	Color	Core Ø mm	Sp.bred mm	Meters/Coil	Coils / Carton	
<b>12,0</b>	0.70	3900	Green	Ø406	150	2000	1	52270750
<b>12,5</b>	0.60	4000				2500		52E60750
<b>15,5</b>	0.70	5000				1800		52D70750
<b>19,0</b>	0,80	10000				1000		52480750



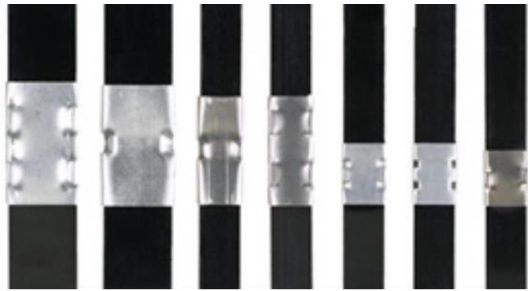
## STEP Strapping Seals & Buckles

STEP offers a wide variety of strapping seals and buckles to accommodate your strapping needs. Strapping seals and buckles are crucial accessories for securing the polypropylene (PP) straps during the strapping process.

### Three Main Types of Strapping Seals:

- Metal Seals
- Plastic Buckles
- Metal Buckles

These metal seals comes in different shapes and sizes to answer various strapping needs.



## Plastic and Steel/Metal Buckles

Are used to secure and tension PP straps by pulling the strap through the buckle. A special type of manual or semi-automatic strapping tool is used to tension the straps

Plastic Buckles	
59511300	Plastic Buckle <b>13S</b> Black 1000pcs/carton
59511301	Plastic Buckle 13H White 5x1000pcs/carton MOQ 5000
59511600	Plastic Buckle <b>16S</b> Black 1000pcs/carton
59511601	Plastic Buckle 16H White 5x1000pcs/carton MOQ5000



## Metal Buckles for WG strap

Are used to secure and tension WG straps by pulling the strap through the buckle. A special type of manual or semi-automatic strapping tool is used to tension the straps

Metal Buckles for WG Strap Specifications			
Strap Width	Design	Pieces/ Carton	Item Number
9	Blank	1000	59510907
13		1000	59511307
16		1000	59511607
19		1000	59511907
25		500	59512507
38		200	59513807



## Semi Open Metal Seals – STEP H-34, H-35 sealer and H-21 tensioner

Allows the seal to be placed along the strap. The strapping is sealed securely using a strapping tensioner and sealer. For use with STEP H-34 and H-35 when tensioning with STEP H-21 on PP strap.

Common type names: VZ2654, VZ2754, S12, S16

Open Type Seal Steel – Standard Length	
59511302	Semi Open Type <b>13</b> x30x0,5mm 2000pcs/box
59511602	Semi Open Type <b>16</b> x30x0,5mm 2000pcs/box



## Semi Open Metal Seals – STEP H42 combination tool

Allows the seal to be placed between the jaws of the combination tools due to its shorter length. The strapping is sealed securely using a strapping combination tool. For use with H42 tensioning and sealer in one tool when using PP strap.

Open Type Seal Steel – Short Length	
59511304	Semi Open Type <b>13</b> x25-28x0,5mm 2000pcs/box
59511604	Semi Open Type <b>16</b> x25-28x0,5mm 2000pcs/box



## Semi Open Metal Seals – HEAVY DUTY with CUT CORNER

Allows the seal to be placed along the strap. The strapping is sealed securely using a strapping hand tool or combination tool. Extra thick seal to allow even better securing and higher breaking strength in the seal point. Can be used for PP and PET strap using Sealer H-34, H-35 and other tools.

Open Type Seal Steel – HEAVY DUTY CUT CORNER	
59511305	Seal AV406 heavy duty with cut corners 13x32x0,6mm open 2000pcs/box
59511605	Seal AV506 heavy duty with cut corners 16x32x0,6mm open 2000pcs/box

## Serrated Metal Seals – STEP H44 combination tool and other.

Serrated Metal seals are for use with PET strap and have serrated teeth on the inside to grip onto the strap securely which helps to improve the breaking strain of the strapping seal. Type names: RG13, RG16, RG 19, VZ2774

Serrated Metal Seals Heavy Duty			
Strap Width	Dimension	Pieces per Carton	Item Number
<b>13</b>	13x30x0,6	1000	59511309
<b>16</b>	16x30x0,6	1000	59511609
<b>19</b>	19x30x0,6	1000	59511909



## Push type seals for PP and PET strapping

Closed push type seal

Push Type Seal BK series for PP and PET strap		
Strap Width	Description	Item Number
<b>10</b>	Push Type Seal 303BK 10x25x0.6mm	59511006
<b>13</b>	Push Type Seal 403BK 13x25x0.6mm	59511306
<b>16</b>	Push Type Seal 503BK 16x25x0,6mm	59511606
<b>19</b>	Push Type Seal 603BK 19x25x0.6mm	59511906



## Push type seals for Steel Strapping

Closed push type seal

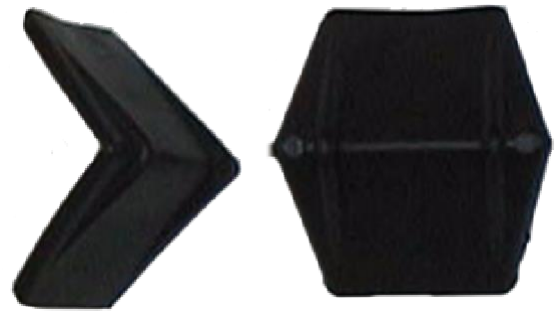
Push Type Seal VZ series for Steel strap		
Strap Width	Description	Item Number
<b>10</b>	Push Type Seal 2333VZ10x22x0.6mm	59511010
<b>13</b>	Push Type Seal 2334VZ 13x22x0.6mm	59511310
<b>16</b>	Push Type Seal 2335VZ 16x22x0,6mm	59511610
<b>19</b>	Push Type Seal 2336VZ 19x22x0.6mm	59511910



# STEP Edge and Corner Protectors

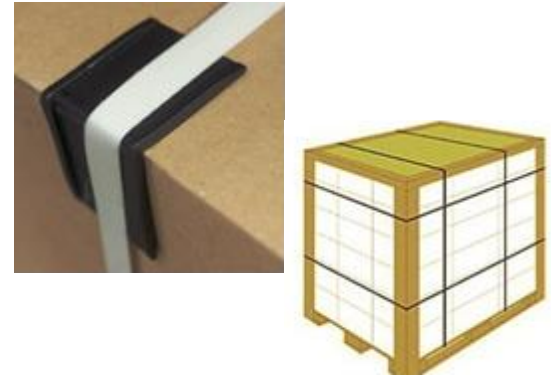
## STEP Edge Protectors

Used to avoid edge damage in the bundling or strapping process. The high tension of the straps can damage or deform the outer form of a heavy box or a package. Edge protectors are placed in the way of the strap. Edge protectors are made of plastic and is hard enough to resist the strap tension but is very light as to not leave a mark on the box or the packaging.



### Specifications:

Type	Item No.	Dimension	Pieces per Carton
3524	59523524	Angle 35 x 24mm	2000
4530	59524530	Angle 45 x 30mm	1700
5030	59525030	Angle 50 x 30mm	1200
5035UP	59525035	Angle 50 x 35mm without tap	2000
5035MP	59525135	Angle 50 x 35mm with tap	2000
6050	59526050	Angle 60 x 50mm	1000
7050	59527050	Angle 70 x 50mm	800



## STEP Corner Protectors

Used primarily for protecting the fidelity of the packaging medium, more commonly used in box packaging. The hard plastic protectors are mostly placed at the box corners to maintain the packaging form.

### Specifications:

Type	Item No.	Dimension	Pieces per Carton
4018	59534018	Angle 40 x 18mm	2700
4020	59534020	Angle 40 x 20mm	2500
4022	59534022	Angle 40 x 22mm	2200
5028	59535028	Angle 50 x 28mm	1000
7028	59537028	Angle 70 x 28mm open side	1000
10028	59531028	Angle 100x100x28	4000
10040	59531040	Angle 100x100x40	2900
10060	59531060	Angle 100x100x60	1800



## Edge boards

Will be added shortly, make request.



Continued from page 2

**Fully Automatic:**

General: Ring strapping is not possible, but Sal-Tech Easy Packaging has possible solutions making arches that can open and close around the product so it can be done. Package size is limited to arch size and the products diagonal length if this is to be turned inside the arch.

- Automatic arch machine TP-601A that feeds the strap around in the arch and retracts it on starting the process, makes the tension and welds the strap. The strap will either be heat, friction and ultra-sonic welded. Positioning the product is done fully automatic with roller conveyor TP-601A or belt conveyors TP-601B, corner pushers, straight pusher, free fall systems with collections and push out, all systems made in project by Sal-Tech easy Packaging according to set specification, based on each projects demands.

**Project specified and Advanced Strapping Equipment:**

			
<b>STEP TP-702 Narrow strap up to 65 straps/minute</b>	<b>STEP TP-701CC</b>	<b>STEP TP-702NIL Inline Cross Strapping</b>	<b>STEP TP-601B x 2 stk. Corner pusher strapping project solution</b>
Graphic industry, printed matters, brochures, newspapers etc.	Corrugated Industry	Graphic Industry, Newspapers, magazines etc.	Distribution hardware, boxes etc.

You can also find combined system with focus on ergonomic issues and time saving. An example is the STEP Ergo Strap Table and Platform scale for STEP TP-202.

Ergo Strap Table, Strapping, scale and electronic lift and lowering of table height.



# STRAP

## Strap Types:

Plastic Strap	Steel Strap	Woven Strap
PP strap – Polypropylen PET strap – Polyester PA strap – Polyamid	Blank steel strap Blue steel strap Black painted steel strap Stainless steel strap	WG strap – Woven basic string hotmelt glued Polyester EG strap – Woven basic string hotmelt glued polypropylene Woven strap – Polyester or Polypropylene

**Delivery Forms:** On ordering it is important to know how the strap is fitted onto your equipment. Typically, strap is delivered on inside core diameter Ø60, Ø76, Ø150, Ø200, Ø230, Ø280 or Ø406 and again these in some standard width of 110, 150, 190mm. The number of meters per coil, ending method, geometrical lock or tape, option of reflector you need to know and decide on ordering.

**Steel strap** is delivered in single coils and multiple oscillating coils.

Strap width that is in production goes from 4 mm to 38 mm and wider if woven types.

## Special applications – The normal and the odd:

**PET** the stiff strap that often is used to substitute steel strap because it is easy to push through openings and has high tensile strength.

**PA strap** that is hydroscopic making it able to work with the product it is holding, wet timber expand and subtract in being wet or dry.

**WG strap** has high tensile strength and is very flexible around corners and can work with the product.

**PP strap** is good for single standing machines in your production space in direct contact with the operator, easy applications and cheap.

Stainless steel strap when the application needs it.

**Environmental Conditions:** PP material has components are of special interest as they often are heat welded:

Polypropylene Homopolymers	approx. 97 %
Chalk	approx. 2-3 %
Color pigment non toxic	approx. 1-2 %

**Toxic and Chemical Reactions:** Polypropylene and Polyester are chemically and biologically inactive. Polypropylene and Polyester can be used in contact with food stuff.

Physical contact: No risk, except mechanical.

Welding of PP material: It is recommended to keep the working area well ventilated at all times. In welding with temperatures below 150°, smoke and damp will be minimal and harmless.

It cannot be recommended to heat weld PET – Polyester without having direct ventilation and it will be best suited for use where the operator is not close by.

Both PP and PET can be friction and ultra-sonic welded, without the need to have ventilation. The welding fumes are kept within the welding zone.

**Risk of Fire:** When polypropylene is heated in air the material will melt at approx. 165 - 170° and decompose will start at 300° giving low molecule hydrocarbons. It will self-ignite at 380°.

**Burning:** Controlled burning is recommended. If ignited, the material will continue to burn, even if the ignition source is removed. Decomposition products from burning are H<sub>2</sub>O and CO<sub>2</sub>. If burned with low presence of oxygen, then it will produce mono oxide, that is toxic.

**Reuse:** According to German law PP material for packaging must be black. We recommend this color is used. For PET strap the color is green. PET material is very easy to reuse.