

uralmetalcompany.ru

PRODUCTS FOR PACKAGING

Catalogue



ABOUT US

"Ural Metal-Processing Company Ltd" (UMC LLC) is involved in metal products manufacture more than 15 years. High quality level of UMC products is confirmed by their demand both on the Russian market and on the markets of neighboring countries and far abroad. Our products are purchased in Germany, Finland, Iran, Belorussia, Latvia, Bulgaria, Kazakhstan, Kyrgyzstan, Azerbaijan.

The core activities of the UMC are:

- cutting of rolled metal sheets into strips with the width from 9 to 1600 mm;
- production of steel welded pipes, shaped pipes (square, rectangular), steel pipes for gas and water pipelines, galvanized pipes;
- production of packaging strap of various types including high-strength packaging strap;
- production of reinforcing profiles necessary to form the rigidity frame of PVC windows;
- production of façade profiles;
- production of galvanized profiles necessary for installation of drywall applied in the formation of frames, prefabricated partitions, claddings and suspended ceilings.



UMC resources:

State-of-the-art, high technology equipment, qualified personnel, production facilities, warehouse facilities, railroad driveways, close proximity to the principal rolled metal supplier, flexible pricing.

Key supplier of rolled metal is PAO Magnitogorsk Iron and Steel Works.

In September 2017, UMC LLC gained the certification to integrated quality management system in accordance with following standards:

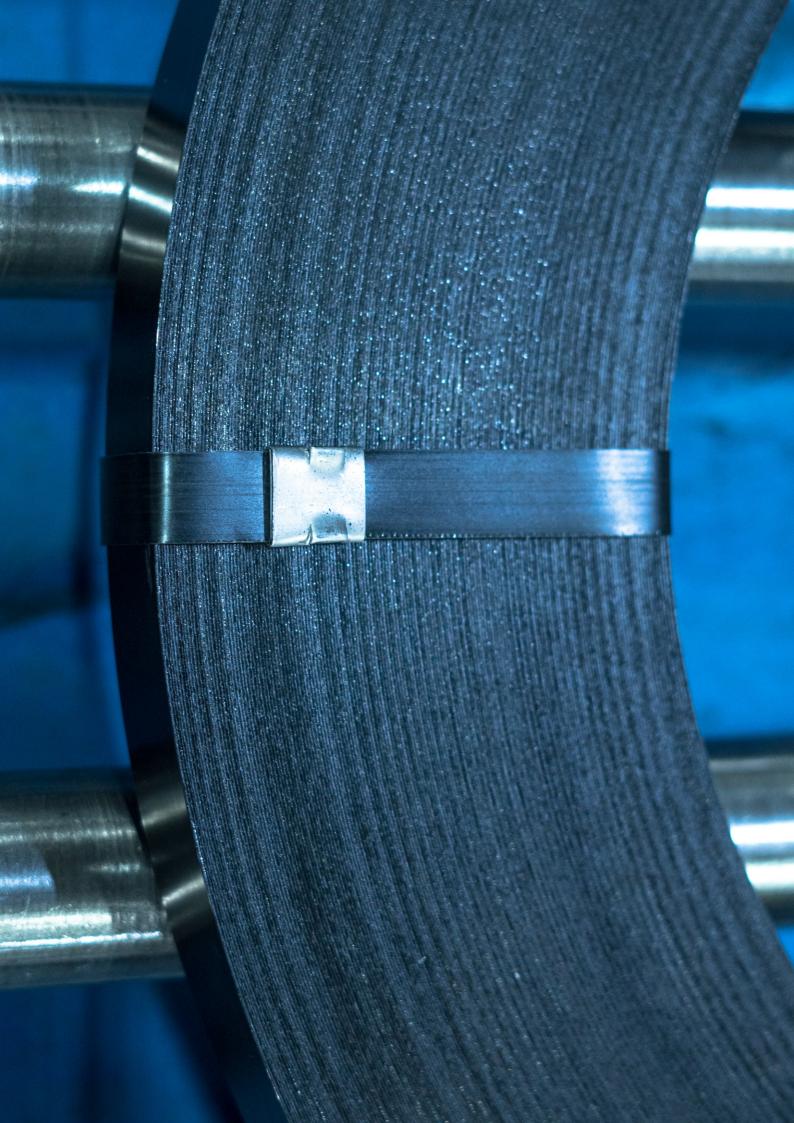
GOST R ISO 9001: 2015 (ISO 9001: 2015) GOST R 54934-2012 (OHSAS 18001:2007)

GOST 12.0.230-2007

GOST R ISO 14001: 2016 (ISO 14001: 2015)







PRODUCTS FOR PACKAGING

In 2016, enriched with 10-year experience in steel strapping production, "Ural Metal-Processing Company Ltd" launched manufacturing of UMC-series super high strength steel strap intended for strapping large-size cargoes, including metal products (pipes, sections, rails, structural and shaped steel, etc.), as well as for packing cargoes for marine transportations.

Cooperation with Signode Industrial Packaging Co. and assistance of Belgian, French and South Korean experts permitted to empower the existing steel strapping production line with a heat treatment module.

This module is a significant competitive advantage of UMC, as the technology is radically different from a conventional one. It makes possible to produce high strength strap which surpasses in some mechanical properties not only domestic, but also foreign analogues.

UMC 970 HE-(High Elongation) super high-tensile strap has an average strength of 1000-1100 MPa and 10% average elongation (at A=100); sorbite structure is achieved by a special mode of rolling and heat treatment. And what's more, the strap with such a structure retains integrity at alternate and impact loads, is resistant to cold-brittleness, fraility and emerging of fatigue cracks, which makes it ideal for cargo transportation by various weighthandling and load-gripping devices. It is also resistant to high-temperature tempering when used for packing hot-rolled coils and other semi-products with the surface temperature up to 900 °C. Such properties guarantee high safety of cargo transportation.

High strength of UMC steel strap complies with GOST R 54934-2012 (OHSAS 18001:2007) safety standard; GOST R ISO 14001: 2016 (ISO 14001: 2015) environmental standard; GOST R ISO 9001: 2015 (ISO 9001: 2015) quality management system standard. UMC strap complies with DIN EN 13246-2001, DIN EN 13247-2001 European Standards which enables its distribution on the EU territory. The use of high strength packaging strap reduces occupational injuries as well as strap tear hazard that can bring about financial losses as a result of damage of goods under packaging. Steel packaging strap supplying can go along with the delivery of packaging seals.

PRODUCTS FOR PACKAGING

High-strength steel packaging strap of UMC-brand (TY 24.32.10-011-94835001-2017)

The company produces UMC-brand packaging steel strap using the proprietary technology in accordance with Technical Specification (TY) 24.32.10-011-94835001-2017. The strap is produced in compliance with the requirements of DIN EN 13246-2001 and DIN EN 13247-2001 standards adopted in CEN and EU countries for strapping, moving and fastening goods. According to European standards, the strap is painted and covered with wax. The strap is produced on modern equipment and has no analogues in Russia and CIS countries.

Application

The packaging strap is designed for strapping and connecting separate units of goods in monoblocks to prevent damage of goods at shipment. The strap has enhanced strength properties and is indispensable in transporting oversize cargoes. UMC (UMC, UMC HE and UMC USLM) straps are suitable for automatic and manual packaging and are used for transporting, packing and storing products in metallurgical, wood processing, construction and other industries.

Steel grades

Steel straps are produced from steel grades qualified as GOST 380-2005, FOCT 1050-2013, GOST 14959-79, GOST 4543-71 and steel grades of foreign steel manufacturers.

Technical capabilities and production

UMC steel straps for packaging are produced as per Technical Specification (TY) 24.32.10-011-94835001-2017. The production process is divided into three principle stages: cutting, heat treatment and application of antirust lacquer and wax. Geometrical dimensions of the strap are highly accurate; strap edges are trimmed. The straps are painted in black, gray and other colours; the strap surface allows further application of a logo or a printed text.



Mechanical properties

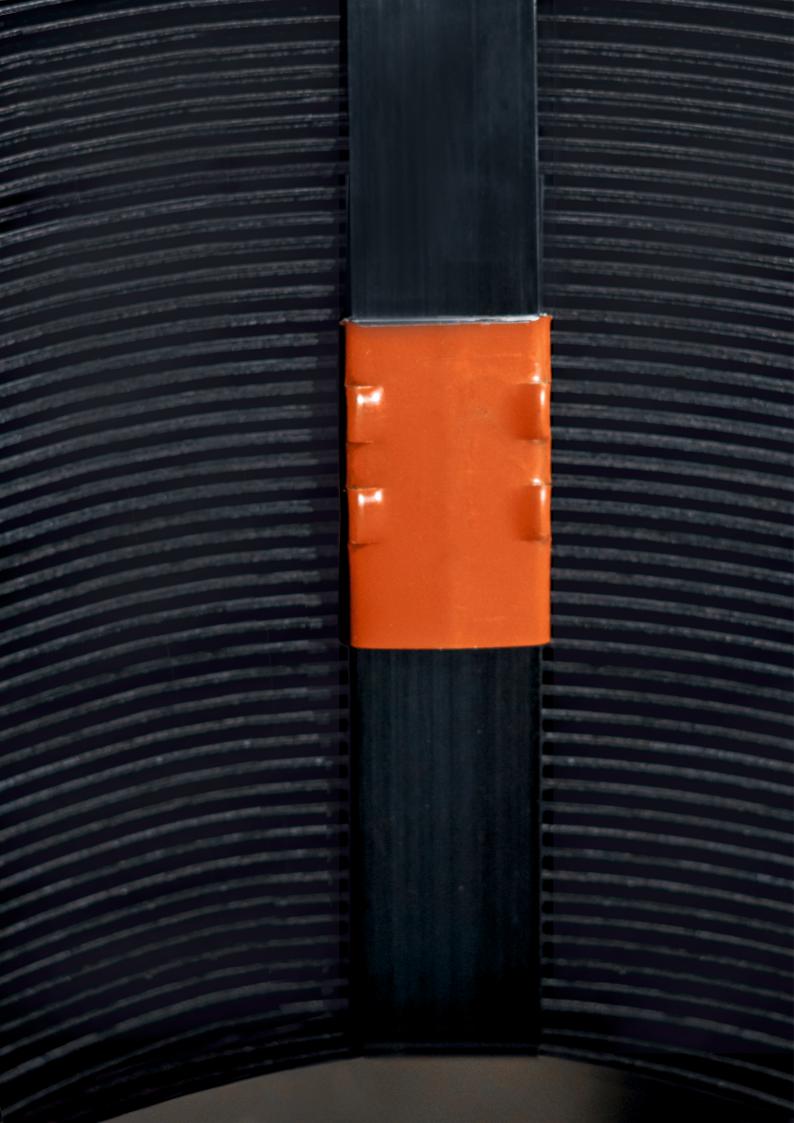
Strap type	Tensile strength QB, N/ mm2 (MPa), no less than	Elongation, %, no less than	
UMC 750	750	2	
UMC 800	800	4	
UMC 925	925	3	
UMC 970	970	6	
UMC 800 HE	800	10	
UMC 970 HE	950	7.5	
UMC 1200 USLM	1150	7	

Dimensions

Strap index	Strap width, mm	Strap thickness, mm	Limit deviation
16 19 25 32	15,9 19,1 25,4 31,75	0,5-1,3	+/-0,15

Values in the table are standard and can be changed following the agreement between the consumer and the manufacturer.







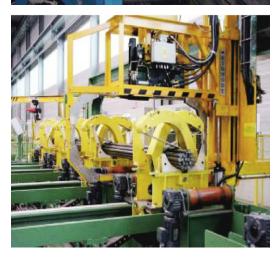
PACKAGING MACHINES

M-410-KLW-BRP-12

Packaging machine







M-410-KLW-BRP-12 packaging machine is designed for packing round, square and hexagon pipes or profiles and may be easily integrated in stacking and packing lines.

It was developed as a module unit with a number of options satisfying most of the customers' needs and with regards to the needs of the modern metallurgical industry:

- high performance at continuous manufacturing and stacking of pipes;
- maximum operation time of the equipment due to reliable technology of M-410 strapping head;
- enhanced flexibility due to a wide range of accessible supplementary modules;
- better stability of packing;
- -continuously high load tension of the strap;
- cost saving operation and repair due to simplicity of the device.

Standard configuration of the BRP strapping device includes all electric index drives and heads. M410 standard strapping head for high strength steel straps 19-33 mm with patented technology of seamless or point high strength connections.

Specifications:

Supplied with the AK-200 head for PET 19-32 mm strapping system

Width of the packing - 500 mm - 1200 mm

Height of the packing – $150\,\text{mm}$ – $1200\,\text{mm}$

Face side of the packing - at least 100 mm

Pointer drive - electrical

Speed of strap feed – 2-3 m/sec (depending on the model chosen)

Strap tension - up to 22 000 N

Firmness of strap connections – up to 90%

Strap size - 19 - 32 mm steel

Strap dispenser - 450 kg coils

Siemens Controller - S7-300

Electrical interface – 400 V 3Ph 50 Hz

Control voltage - 24 V DC

Consumption – up to 40 kVA (welding)

1200 l/cycle (M410)

Device weight – 2-3 tons depending on configuration



AK200-KLW-M410-BRS-12

Strapping machine







BRS machine is designed for strapping sheet products, both in length and in width, and can be integrated into packing lines and equipped with different machinery options.

Signode BRS strapping machine for sheet packing was developed as a modular plant with regards to the current needs the metallurgical industry:

- high performance of continuous rolled sheet production;
- maximum time of continuous operation with the Signode technology of applying the head for 19-32 mm steel and polyester straps;
- enhanced flexibility due to the system of supplementary modules:
- enhanced stability of packaging due to continuously high load tension of strap;
- cost saving operation and repair due to simplicity of the device.

Standard configuration of sheets strapping device includes all electric index drives and heads. Standard strapping head is M410 strap for AK200-HDX steel straps 19-33 mm of high strength steel or polyether PET strap. Strapping head is mounted on the top and is freely floating for optimal transmission of the strap tension. There are also options for point welding and seamless welding of steel straps available.

Specifications:

Width of the package – 800 mm – 2000 mm

Height of the package - 100 mm - 600 mm

Package length (variable) - up to 8 m

Plates drive – electrical or pneumatic

Speed of strap feeding – 2–3 m/sec (depending on the model chosen)

Strap tension – 6 000 – 20 000 N (depending on the head chosen)

Firmness of strap connections – up to 90%

Strap size - 19-32 mm PET/steel

Strap dispenser - 75-450 kg coils

Siemens Controller - S7-300

Electrical interface – 400 V 3Ph 50 Hz

Control voltage - 24 V DC

Consumption – up to 40 kVA (welding)

1200 l/cycle (M410)

Device weight – 2-3 tons depending on configuration



PNEUMATIC TOOLS

Signode HN-1-114, FN-114T

Pneumatic tensioners

Is meant for wrapping large or compressible packages. HN-1-114 provides uniform and precise tensioning due to the air pressure regulator. The tool is designed for steel strap.





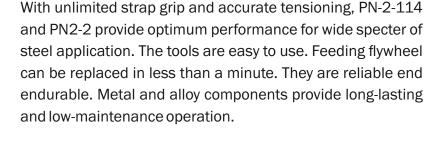


Packaging strap			Siza dimanciano	Tension	Woight
Strap width, mm	Strap thickness, mm	Strap material	Size dimensions (LxWxH), mm	force, N	Weight, kg
19,0-31,8	0,79-1,12	Steel	-	13350	10,2

Signode PN-2-114, PN2-2

Push-type pneumatic tensioners







Packaging strap			Size dimensions	Tension	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(LxWxH), mm	force, N	kg
19,0-31,8	0,51-1,12	Сталь	-	7117	3,7

Packaging strap			Siza dimanciano	Tension	Woight
Strap width, mm	Strap thickness, mm	Strap material	Size dimensions (LxWxH), mm	force, N	Weight, kg
50,8	1,12	Сталь	-	7117	3,7



Signode NSP-1435, RCNS-250, RCND-34, RCND-114

Pneumatic clamp sealers



NSP-1435 pneumatic crimp sealers, pistol grip, one notch, for steel strap size 19 to 50.8 mm.

	P	ackaging strap	a		
	Strap width, mm	Strap thickness, mm	Strap material	Size dimensions (LxWxH), mm	Weight, kg
NSP-1435	31,8	0,79-0,89	Steel	-	8,2
RCNS-250	50,8	1,12-1,27	Steel	-	8,2
RCND-34	19	0,64-1,12	Steel	-	8,2
RCND-114	31,8	0,64-1,12	Steel	-	8,2

COMBINATION TOOLS

PNSC2-34HT, PNSC2-12/58/34 PNSC2-34HT, PNSC2-12/58/34 pneumatic push-type single notch combination tool for steel strapping.

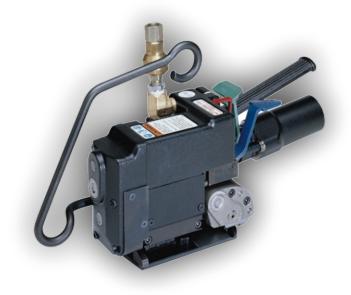


P	Packaging strap			Tension	Weight,
Strap width, mm	Strap thickness, mm	Strap material	Size dimensions (LxWxH), mm	force, N	kg
16-19	0,43-0,64	Steel	-	3114	4,3



SLP-12/58/34

Combination pneumatic tools



Pneumatic triple-notch combination tools are designed for difficult operations, such as packaging aluminium ingots, wire coils, steel bars, steel sheets and pressed steel.

More to that, sealless joints are flatter, and therefore potential indentation damage is reduced when loads are stacked.

Packaging strap			Size dimensions	Tension	Woight
Strap width, mm	Strap thickness, mm	Strap material	(LxWxH), mm	force, N	Weight, kg
12-19	0,43-0,64		-	-	-

SPC-3431, SPC-114



Combination pneumatic tool, sealless, with 4 teeth one of which is reversed, designed for operating under high compression.

Packaging strap			- Size dimensions	Tension	Woight
Strap width, mm	Strap thickness, mm	Strap material	(LxWxH), mm		Weight, kg
32	0,64-0,79	Steel	-	13345	16,8



BATTERY POWERED TOOLS

GripPack Cutter CB

Battery powered cutter



Signode's lightweight, battery-operated GripPack strap cutter enhances productivity and safety of operator working with steel or plastic strap. Unlike manual tools where operator's effort is required, the GripPack cutter quickly and effortlessly cuts up to 2 pieces of 1-1/4" x .044" (32 mm x 1.12 mm) of steel or plastic strap. GripPack CB cutter offers two modes of operation: one for non-tensioned strap to maximize cutting speed, and one for tensioned strap to ensure operator's safety. In the tensioned strap mode, the GripPack cutter holds the tensioned strap in process of cutting and after cutting it still holds one end of the strap in its curved jaws allowing the operator to stay away from the rebounding strap end.

	Packaging strap		Size dimensions (LxWxH), mm		Woight
Strap width, mm	Strap thickness, mm	Strap material		Voltage, V	Weight, kg
32	до 1,45	Steel, plastic	240	110/220	3,4

GripPack PB-114

Push-type tensioner



Battery-powered tensioner is used for wide range of packaging operations providing maximum performance and productivity in comparison with pneumatic tools.

	Packaging strap			Siza dimanciano	Tension	Woight
Stra width		Strap thickness, mm	Strap material	Size dimensions (LxWxH), mm	force, N	Weight, kg
19-3	32	0,5-1,12	Steel	120+	6600	3,9



GripPack RCBD-3431/1031/ 1431 RCBS-1431

Battery operated packers (sealers) for steel straps with double and single notch

GripPack Double Notch Sealer. Lightweight and endurable, GripPack sealer is easy to use. Combination of low weight and portability with maximum power increases its productivity when fastening steel straps in heavy duty manual operations.



Packaging strap			Number of cuts		Woight
Strap width, mm	Strap thickness, mm	Strap material	per 1 charge	Voltage, V	Weight, kg
19-32	0,64-0,80	Steel	120+	110/220	3,6

GripPack SLB-12/ 58/34HS/34HT

Battery-powered combination tool for steel strap with a notch seal

Signode GripPack SLB combination tool for steel strapping delivers high tensions and velocity to ensure maximum power and performance. Its automatic control and numerous functions increase productivity and allow the tool to pack tin plates, cut-to-length sheets, pipes, tubes, steel, big coils and many other things.



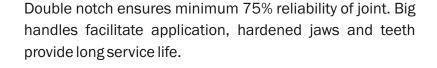
	Packaging strap			Number of cuts		Woight
١	Strap width, mm	Strap thickness, mm	Strap material	per 1 charge	Voltage, V	Weight, kg
	12-19	0,43-0,64	Steel	100+	110/220	6,35



MANUAL TOOLS

C-5823/3423

Manual front and side action sealer with double notch for steel strapping





Packaging strap			Number of cute		Woight
Strap width, mm	Strap thickness, mm	Strap material	Number of cuts per 1 charge	Voltage, V	Weight, kg
19-32	0,64-0,80	Steel	120+	110/220	3,6

SCMH-58/34, SCM-12/58/34

Manual sealless combination tool with triple notch for steel strapping



SCMH, SCM tools have ergonomic design to lessen the fatigue of operator. Double gears provide high tension, two belts are fed in, minimum effort is needed for clamping. Simplicity of design provides low maintenance. The tool has simple regulations and small number of wear parts. Made of Signode, SCMH and SCM metal and alloys, it is rugged and endurable.

	Pa	ackaging strap		Weight,	
	Strap width, mm	Strap thickness, mm	Strap material	Type of joint	kg
SCMH-58/34	16-19	0,51-0,79	Steel	3-notch seamless	5
SCM-12/58/34	13-19	0,43-0,63	Steel	3-notch seamless	3,8



PFH

Heavy Duty Manual Push-type Tensioner for 3/4" to 1 1/4" wide steel strap



The Signode PFH is meant for heavy duty applications. With this tool, operator can bring the strap to desired tension with minimum cessations, efforts and strap waste. It is equipped with a feeding tooth-gear which fixates the strap firmly. There is no limit to the amount of looseness the tool can pull out of the strap. Fast and easy to use, it is used for painted and waxed strappings. Push-type tensioners with a feeding tooth-wheel are specifically meant for round or irregular shaped bundles.

	Packaging strap					
Strap width, mm	Strap thickness, mm	Strap material	Weight, kg			
19-32	0,64-0,89	Steel	3,2			

Signode TH-114

Manual steel tensioner with tensioning wheel



Signode TH-114 tensioner is meant for strapping with steel strap of products having flat horizontal or vertical surface, such as board, profile, border stone and other cargoes of the kind.

	Weight		
Strap width, mm	Strap thickness, mm	Strap material	Weight, kg
19-32	0,74-0,89	Steel	3,2

PH-2



PH-2 manual rack-and-gear push-type tensioner for 19-32 mm steel strap.

	Weight,			
Strap width, mm	Strap thickness, mm	Strap material	kg	
19-32	0,43-0,89	Steel	3,2	



HS-19

Type: mechanical/sealer



Manual sealer for precise clamping with single notch which provides 65-70% reliability. It is meant to be used along with the tool HT-32.

Packaging strap			Size dimensions	Tonoion force	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	Tension force, N	kg
19	0,8	Steel (up to 850 N/mm2)	730x170x40	-	4

HS-32

Type: mechanical/sealer



Manual sealer for precise clamping with single notch which provides 65-70% reliability. It is meant to be used along-side with the tool HT-32.



	Packaging strap			Size dimensions	Tension force,	Weight,
	rap 1, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
3	2	0,8	Сталь (до 850 H/ мм²)	730x170x40	-	4



PS-32

Type: pneumatic/sealer



Pneumatic one-handle sealer for perfect single notch clamping. The notch provides approximately 65-70% reliability. Safety mechanism excludes improper manipulations of operating staff, therefore guaranteeing correct clamping.

Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
32	0,8	Steel (up to 850 N/mm²2)	270x240x120	-	3,1

HT-19/32

Type: mechanical/tensioner



Manual tensioner for strapping round objects and packages with small surface area. Partly overlapped seals are clamped with HS-32 sealer.

Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
19-32	≤0,9	Steel (up to 850 N/mm²2)	690x100x140	-	4,3

PT-32

Type: pneumatic/tensioner



Pneumatic tensioner specially designed for hardware and metallurgical industry. The tool is convenient in usage and provides tension up to 8500 N. For clamping there are used partly overlapped seals which are clamped with PS-32 pneumatic sealer.



Packaging strap			Size dimensions	Tonoion force	Weight,
Strap width, mm	Strap thickness, mm	Strap material	Strap (L*W*H), mm	Tension force, N	kg
19-32	0,8	Steel (up to 850 N/mm2)	330x120x100	Up to 8500	4,8



HC-410

Type: mechanical/cutter



Used for cutting steel or PET strap. The cutter is made of hardened carbon steel.



Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
≤50	Up to 1.2	Steel (up to 1100 N/mm²2)	600x60x180	-	4

HH-191

Type: mechanical /notch



High-tech manual combination tool is used for strapping on horizontal and vertical surfaces of industrial products. Provides reliable connection.

Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
16-19	Up to 0,8	Steel (up to 850 N/mm²2)	400x100x330	-	5

HH-333

Type: mechanical /notch



Manual strapping tool is used in wide range. Simple and effective in usage, it is an irreplaceable assistant at any working conditions. Has light weight.

Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
13-19	0,38-0,58	Steel (up to 850 N/mm2)	387x162x308	850	3,9



PH-19

Type: pneumatic/combination



Pneumatic combination strapping tool is used for single notch clamping overlapped seals. Perfectly fit for strapping pipes, wire coils, steel bars as well as other objects of irregular shape. The tool is supposed to be hung.



Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
19	0,63	Steel (up to 850 N/mm2)	304x145x155	3000	4

PH-32

Type: pneumatic/combination



Pneumatic combination strapping tool for strapping objects of round and irregular shape. Clamping with double notch overlapped seals ensures 80-85% reliability.



Design of the tool enables convenient and effective operation. Tensioning roller lifts the strap up pneumatically making the strap feed effortless. The tool is supposed to be hung.

Packaging strap			Size dimensions	Tension force,	Weight,
Strap width, mm	Strap thickness, mm	Strap material	(L*W*H), mm	N	kg
32	1,1	Steel (up to 850 N/mm2)	460x380x260	Up to 16000	15, 4

SEALS AND JOINTS

Types of seals in packaging strap produced and supplied by UMC LLC

Seals with open short edges (Snap-on seals)	Usage of this type increases the speed of packaging operations due to the possibility of using lightweight tensioners. Placed onto strapping ends after tensioning.	1
Seals with long flap edges (Push- type seal)	This type is used for manual setting, primary for round cargoes and not large-sized loads. It provides high joint strength; other cargoes can be placed on the seals. It is made of thin cold-rolled sheet without coating as well as with thermodiffusion and lacquer-and-paint coating. Not applicable for magazine-type tools.	4
Seals with one open short edge (Open-flange seals)	This type is used for heavier cargoes in comparison with snap-on type. In contrast to snap-on seals, these seals exclude periodic strap edge deformation.	
Seals with short flap edges (Thread-on seals)	Widely-used type of seals, placed onto the strapping before fastening. Generally used on bales, bundles and larger strap width sizes.	4
Magazine type seals (Nestack® seals)	Such seals are used in magazine-type packaging equipment. Also may be used in manual tools. Joint is provided by small notches on the seal ends and on the strapping.	

On customer's request our company can deliver packaging seals for manual fixation and also criss-cross seals for 19-32 mm width strapping.

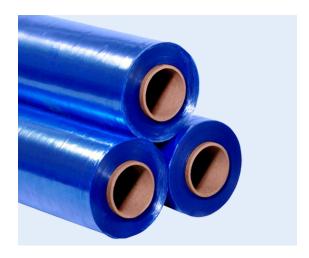
Joint strength

Joint type	Joint strength, as percentage of strap tensile strength*		
Single notch Double notch	= 45% = 75%		
Sealless	= 75%		
Welded (machinery)	= 80-90%		
Friction (2 seals)	= 75%		
Friction (3 seals)	= 90-95%		

^{* -} strength criteria do not include joint resistance to shock loads, only friction seal types possess optimal properties for this type of destruction.

OTHER PACKAGING MATERIALS

STRETCH FILM





Stretch films with contact-volatile corrosion inhibitor are most effective materials for forming transport packagings for complex shape products, such as steel coils, caseworks, large bearings, etc.

Stretch film is made of linear polyethylene and has co-extrusion structure enabling maximum relative elongation (prestretch). Contact-volatile corrosion inhibitor of the $\Phi\Gamma$ or MMV type is implanted into the inner layers of the stretch film.

Stretch film can be used both for manual packaging of products and for automatic packaging lines.

Stretch film minimizes internal volume of air in the package and ensures snuggest fit of inhibiting material to the surface of metal. Multiple wrapping of the surface with the stretch film creates a polymer barrier layer of the required thickness.

Multi-layer protective layer of stretch film provides increased resistance to punctures, cuts, tearing and crushing by forming a protective barrier against external factors.

There are several types of 40-micron stretch film:

- Π340CT- ΦΓ to protect cast iron and carbon steel;
- $\Pi \mbox{340CT-}$ MMU to protect cast $\,$ iron, $\,$ carbon steel, non-ferrous metals and alloys.

Film thickness is from 20 to 100 micron.

Film is produced in 100-1000 mm width coils for manual and machine packaging.



The "Ural Metal-Processing Company Ltd"

- order@umc970.ru
- +7(3519) 51-70-15
- Postal address: 455007, Building 1, 10 Kommunalnaya St, Magnitogorsk, Chelyabinsk region
- uralmetalcompany.ru



Damir Saifumuliukov
Head of Packaging
Products Sales Department

+7(3519) 51-70-15 (ext. 101)



Danil Gavrilov
Senior Expert of Packaging
Products Sales Department

+7(3519) 51-70-15 (ext. 107)

All the information in the Catalogue is for reference and is not a public offer stipulated by Article 437 of the Civil Code of Russian Federation. The manufacturer retains the right to change the characteristics of products without notifying the Catalogue holder.

For notes

For notes





UMC CORE PRODUCTS:

- ► STEEL PIPES
- ► STEEL STRIP
- ► PRODUCTS FOR PACKAGING
- ► STEEL REINFORCING PROFILE
- ► STEEL FACADE PROFILE
- ► CONSTRUCTION PROFILE FOR GYPSUM BOARD