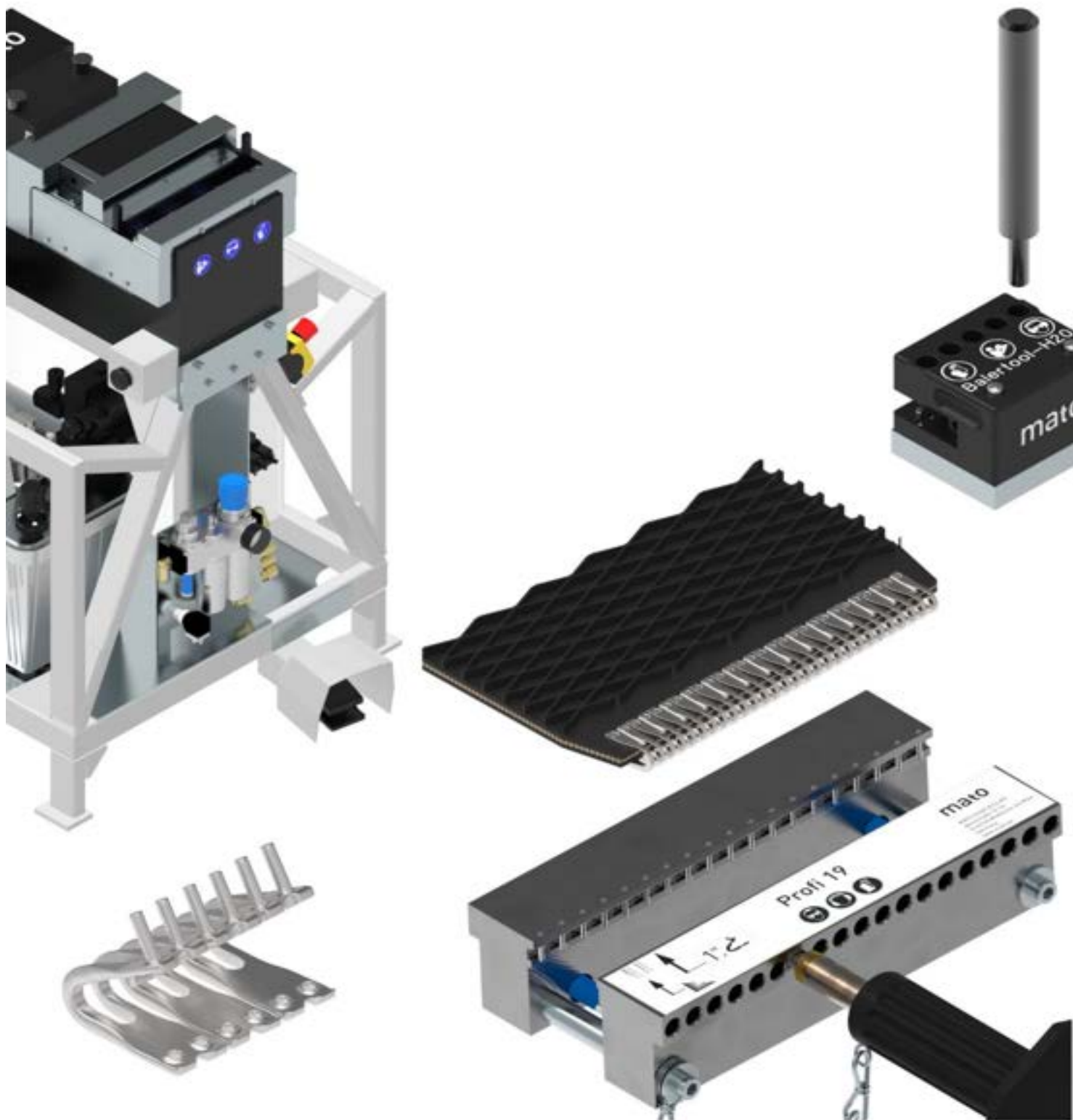


mato

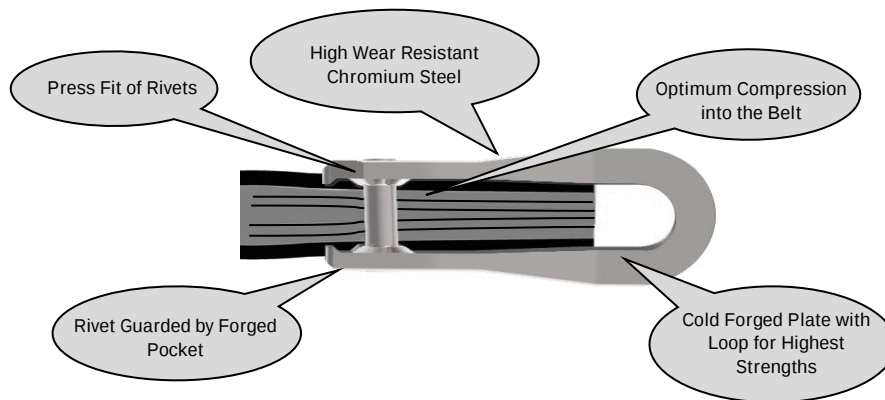


The High Performance Fasteners U24 and H24 have been developed for very high wear applications such as spliced belts used in Round Balers. They are proven to be the highest performing splice on the market due to high strength and long splice life and will perform equally well in other applications.

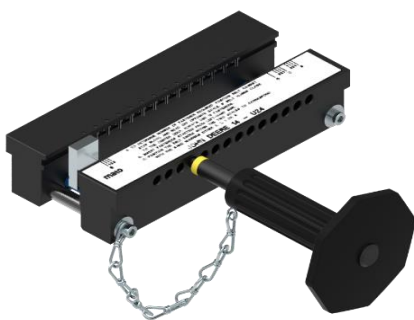
Note:

The U24 fastener is suitable for belts in the range of 4 - 7 mm thickness.

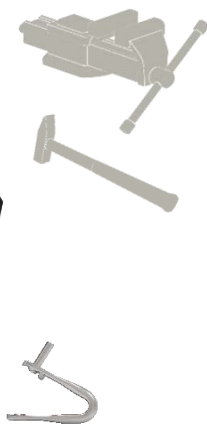
The H24 fastener is only suitable for belts in the range of 5 - 6 mm thickness.



The U24 is installed in the belt using a vice lacer and the H24 is installed using a hammer lacer. The MATO fastener features resulting in high durability are highlighted below. The method of installation of the U24 and H24 fasteners are two separate systems described below.



U24



H24



High Performance Fastener U24
(A Bench Vice and MATO U24 Vice Lacer are required)

The U24 fastener is designed specially to be installed with a vice tool as seen above.

The rivets can be installed using a hammer and hand punch or alternatively with a pneumatic hammer and punch.

For volume lacing a pneumatic-hydraulic Vice Lacer (Power-Vice 25) is available. For even higher volume lacing an automatic state of the art electro hydraulic (HEM) lacing machine is available.

High Performance Fastener H24
(A MATO H24 Hammer Lacer is required)

With this system there is no requirement for a vice at the work place. The MATO hammer lacer just requires a flat level base for installation. The fasteners are slightly pre-bent for ease of installation.

The lacer can be used for multi step lacing for wider belts or alternatively the hammer lacer is offered in different widths.

Selection Chart for Fasteners and Pins

Belt Width min./max.(mm)	Strip Length of Fastener (mm)			Number of Fasteners per Strip	Recommended Length of Connecting Pin (mm)
155 - 165	-	132	-	12	142
177 - 187	-	154	-	14	165
188 - 198	165	165	165	15	175
210 - 220	-	187	187	17	197
221 - 231	198	198	198	18	208
276 - 286	-	253	253	23	265
298 - 308	-	275	-	25	286
353 - 363	-	330**	-	30	341
Hammer Installed Fasteners for "Bench Vice Lacers"	U24AS	U24BS	U24CS	<u>Example:</u> Belt Width = 190mm, High Performance Fastener H24 BS, Strip length 165 mm 15 Fasteners, Connecting Pin length 175 mm	
					
Hammerinstalled Fasteners without "Bench Vice"	-	H24BS	-		
					
Belt Strength (kN/m)	bis 520				
Min. Pulley Ø (mm)	75				
Belt Thickness (mm)	4 - 5*	5 - 6*	6 - 7*		

Other strip lengths available on request (minimum order 5 boxes)

Note :

The distance from the belt edge to the fastener at each end must be a minimum 10mm and the sum of the edge distances must not exceed 35mm.

Strips can easily be shortened to suit variation in belt width
(Width each fastener = 11 mm)

* Please contact us for advice if your belt thickness is outside the above range.

Strip Length	Packing Unit	Belt Thickness	Order No.	kg
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Belt Fastener U24AS, without Connecting Pin

Belt Strength up to 450kN/m Minimum Pulley Diameter 75 mm

165 mm	PU 12	4.0 - 5.0 mm	41 114 24 05	0.9
198 mm	PU 10	4.0 - 5.0 mm	41 114 24 13	0.9

Belt Fastener U24BS, without Connecting Pin

Belt Strength up to 450kN/m Minimum Pulley Diameter 75 mm

132 mm	PU 12	5.0 - 6.0 mm	41 114 24 14	0.7
154 mm	PU 12	5.0 - 6.0 mm	41 114 23 99	0.9
165 mm	PU 12	5.0 - 6.0 mm	41 114 24 01	0.9
187 mm	PU 10	5.0 - 6.0 mm	41 129 59 37	0.9
198 mm	PU 10	5.0 - 6.0 mm	41 114 24 15	0.9
253 mm	PU 8	5.0 - 6.0 mm	41 129 59 15	0.9
275 mm	PU 8	5.0 - 6.0 mm	41 114 24 16	1.0

Belt Fastener U24CS, without Connecting Pin

Belt Strength up to 450kN/m Minimum Pulley Diameter 75 mm

165 mm	PU 12	6.0 - 7.0 mm	41 114 24 06	0.9
187 mm	PU 10	6.0 - 7.0 mm	41 129 61 20	0.9
198 mm	PU 10	6.0 - 7.0 mm	41 114 59 16	0.9
253 mm	PU 8	6.0 - 7.0 mm	41 129 69 22	0.9

Belt Fastener U24AS, with Connecting Pin T1F (Dia. 3.0 mm)

Belt Strength up to 450kN/m Minimum Pulley Diameter 75 mm

165 mm	PU 12+	4.0 - 5.0 mm	41 114 24 02	1.0
198 mm	PU 10+	4.0 - 5.0 mm	41 114 24 12	1.0

Belt Fastener U24BS, with Connecting Pin T2F (Dia. 3.4 mm)

Belt Strength up to 450kN/m Minimum Pulley Diameter 75 mm

132 mm	PU 12+	5.0 - 6.0 mm	41 114 24 09	0.8
154 mm	PU 12+	5.0 - 6.0 mm	41 114 23 98	1.0
165 mm	PU 12+	5.0 - 6.0 mm	41 114 24 00	1.0
187 mm	PU 10+	5.0 - 6.0 mm	41 129 60 55	0.9
198 mm	PU 10+	5.0 - 6.0 mm	41 114 24 07	1.0
253 mm	PU 8+	5.0 - 6.0 mm	41 114 24 18	1.0
275 mm	PU 8+	5.0 - 6.0 mm	41 114 24 19	1.1

Belt Fastener U24CS, with Connecting Pin T2F (Dia. 3.4 mm)

Belt Strength up to 450kN/m Minimum Pulley Diameter 75 mm

165 mm	PU 12+	6.0 - 7.0 mm	41 114 24 03	1.0
187 mm	PU 10+	6.0 - 7.0 mm	41 114 60 56	0.9
198 mm	PU 10+	6.0 - 7.0 mm	41 129 59 10	1.0
253 mm	PU 8+	6.0 - 7.0 mm	41 129 69 10	1.0



Rivets: Stainless Steel 304
Plate Material: Chromium Steel 430

- High compression in the belt
- Rivets are a press fit rivets in the plate.
- Cold forged plate and loops for highest strengths
- High wear resistance and long life properties

Packing Units:
e. g. PU 10 includes 10 strips of fasteners. Strip length can easily be shortened.



Material of Connecting Pin:
Notched Spring Steel

Fasteners: as described above

Packing Units:
e.g. PU 10+ includes 10 strips of fasteners
+ 5 connecting pins.
Strip length can easily be shortened.

See pages 6 - 7 for Accessories and pages 14 - 15 for additional Connecting Pins.

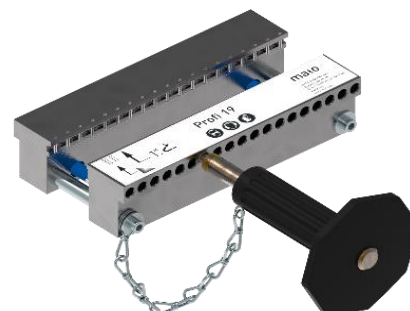
Description	Width	Order No.	kg
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U24 Vice Lacer Profi

Profi 5-55 incl. Punch	55 mm	41 129 58 82	2.9
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Vice Lacer Profi 19

Profi 19-209 incl. Punch and prepared for mounting an optional Rivet Flattening Bar	209 mm	41 129 58 17	5.6
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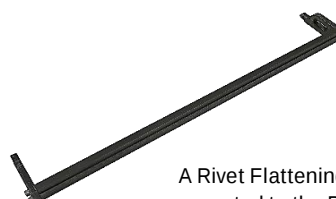


Profi 25-275 incl. Punch and prepared for mounting an optional Rivet Flattening Bar	275 mm	41 129 58 49	5.6
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Every Vice Lacer is supplied with a hand punch. The lacers are designed to be used in a bench vice, Profi 5-55 will hold 5 hooks at a time and the Profi 19-209 will hold 19 hooks at a time etc. For example: If you want to install a splice with 17 fasteners (187 mm), the installation is made in four steps using the Profi 5-55 and in one step, using the Profi 19-209.

Accessories for Vice Lacer

Rivet Flattening Bar 19 RS for Profi 19		41 129 80 08	0.3
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Rivet Flattening Bar 25 RS for Profi 25		41 129 80 07	0.7
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A Rivet Flattening Bar can be mounted to the Profi19 and Profi 25 optionally. This way, the rivet heads can be flattened after the installation with the Vice Lacer.

Hydraulic Installation Units U24 / pneumatic Drive

POWER-VICE 25-275 (Hydraulic Installation)	275 mm	41 129 58 18	50.0
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Installation Unit POWERVICE 25 replaces the conventional Vice by means of a pneumatically driven Hydraulic Power Pack (minimum 4 bar air pressure necessary). Belt Fasteners U24 are pressed onto the belt directly during the pneumatic closing movement. Then the rivets can be punched using a Pneumatic Hammer. The splice is completed by pivoting the Rivet Flattening Bar and by repeated punching with the Pneumatic Hammer. This installation tool can hold up to 25 Fastener segments (275 mm strip length).

For processing bigger quantities, we can offer hydraulic lacers (HEM) as well.

Accessories for System U24

Vice Lacer Kit in a Box

Description	Order No.	kg
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U24 Belt Lacing Kit

Profi Belt Lacing Kit U24

41 129 58 26

10.0



Profi Belt Lacing Kit consists of:

- Vice Lacer Profi 19
- Belt Skiver 18
- Pneumatic Hammer with Punch
- Plastic Case

More Accessories U24

Punch U24
(Spare)

411295825

0.4

Belt Skiver 18
Skiving Width 18 mm,
with double sided blade

41 129 58 27

1.0

Spare Blade GH18
for Belt Skiver 18 (PU5)
with double sided blade

41 129 58 28

0.03



One pass with the adjustable Belt Skiver 18 reduces the belt cover leaving 5-6 mm of belt thickness. The adjustable Hold-down Device allows processing even worn belts up to a maximum of 10 mm belt thickness.

Hammer 05
(500g, for U24 Splices)

44 121 02 03

0.6



High Performance Fasteners H24

Hammer Installed Plate Fasteners for Hammer Tools (Installation without Vice)

Strip Length	Packing Unit	Belt Thickness	Order No.	kg
Belt Fastener H24BS, without Connecting Pin				
Belt Strength up to 450kN/m			Minimum Pulley Diameter 75 mm	
154 mm	PU 12	5.0 - 6.0 mm	41 115 23 99	0.9
165 mm	PU 12	5.0 - 6.0 mm	41 115 24 01	0.9
187 mm	PU 10	5.0 - 6.0 mm	41 115 24 06	0.9
198 mm	PU 10	5.0 - 6.0 mm	41 115 24 07	0.9
253 mm	PU 8	5.0 - 6.0 mm	41 115 24 08	0.9
275 mm	PU 8	5.0 - 6.0 mm	41 115 24 09	1.0
330 mm	PU 6	5.0 - 6.0 mm	41 115 24 02	0.9



Rivets: Stainless Steel 304
Plate Material: Chromium Steel 430

- High compression in the belt
- Rivets are a press fit rivets in the plate.
- Cold forged plate and loops for highest strengths
- High wear resistance and long life properties

Packing Units:
e. g. PU 10 includes 10 strips of fasteners. Strip length can easily be shortened.

Belt Fastener H24BS, with Connecting Pin T2F (Dia. 3.4 mm)				
Belt Strength up to 450kN/m			Minimum Pulley Diameter 75 mm	
154 mm	PU 12+	5.0 - 6.0 mm	41 115 23 98	1.0
165 mm	PU 12+	5.0 - 6.0 mm	41 115 24 00	1.0
187 mm	PU 10+	5.0 - 6.0 mm	41 115 24 12	0.9
198 mm	PU 10+	5.0 - 6.0 mm	41 115 24 10	1.0
253 mm	PU 8+	5.0 - 6.0 mm	41 115 24 11	1.0
275 mm	PU 8+	5.0 - 6.0 mm	41 115 25 15	1.1
330 mm	PU 6+	5.0 - 6.0 mm	41 115 24 03	1.0



Material of Connecting Pin:
Notched Spring Steel

Fasteners: as described above

Packing Units:
e.g. PU 10+ includes 10 strips of fasteners
+ 5 Connecting Pins.
Strip length can easily be shortened.

See pages 9 - 11 for Accessories and pages 14 - 15 for additional Connecting Pins.

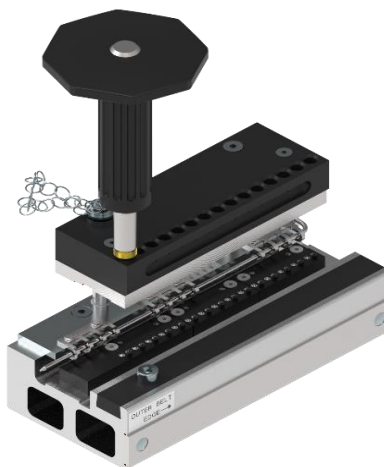
Accessories for System H24

Profi Installation Units (Installation without Vice)

Description	Working Width	Order No.	kg
H24 Profi Installation Units + Accessories			

Profi 15-180	180 mm	41 129 69 61	4.2
Profi 15-350	350 mm	41 129 69 62	6.8
Profi 15-500	500 mm	41 129 69 65	9.6
Profi 30-1000	1000 mm	41 129 70 10	17.5

Installation Unit H24 Profi 15-180

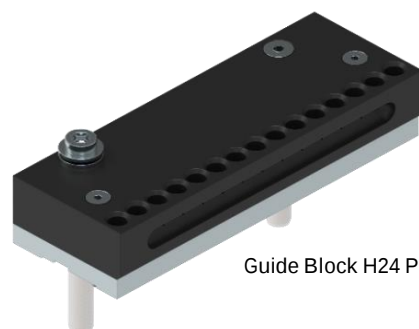


The Profi Installation Units are designed to be used on a work bench or any flat solid base. It might be also used directly on site.

All Profi tools can be used for continuous splicing. Using a 300g hammer or a pneumatic hammer to install the the fasteners.

Guide Block H24 Profi 15 common to all 24 - Profi Installation Units	41 129 70 00	1.1
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Guide Block H24 Profi 30 recommended only for H24 - Profi 30-1000 (without picture)	41 129 70 11	2.2
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Guide Block H24 Profi 15

Punch H24 Profi (Spare)	41 129 69 74	0.4
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Description	Width	Order No.	kg
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Installation Units H24 ECO + Accessories

Eco 15-180	180 mm	41 129 69 63	3.6
Eco 15-350	350 mm	41 129 69 64	6.2

H24 Installation Unit Eco 350



incl. Guide Block H24 Eco 15
and Punch 24 Eco

The Eco Installation Units are designed to be used on a work bench or any flat solid base. It might be also used directly on site.

All Eco tools can be used for continuous splicing.
Using a 300g hammer or a pneumatic hammer to install the the fasteners.

Guide Block H24 Eco15 for Eco Installation Units		41 129 69 99	0.3
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Punch H24 Eco		41 129 69 75	0.2
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Guide Block



H24 Belt Lacing Set

Profi 15-180 Basis Set	180 mm	41 129 69 68	8.3
Profi 15-350 Basis Set	350 mm	41 129 69 69	11.3



Profi 180 or 350 Basis Set
consists of :

- Profi Installation Unit 180 or 350
- Belt Skiver 18
- Hammer 300g
- Plastic Case

Description	Working Width	Order No.	kg
Installation Units H24 BALERTOOL 5-55			

BALERTOOL 5-55	38 001 23	0.5
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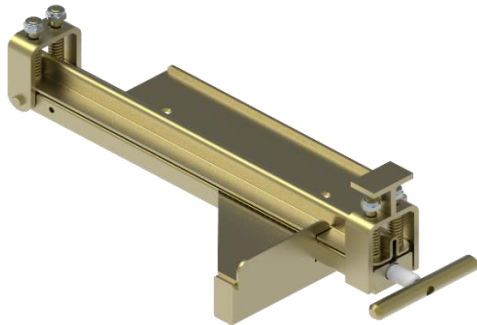
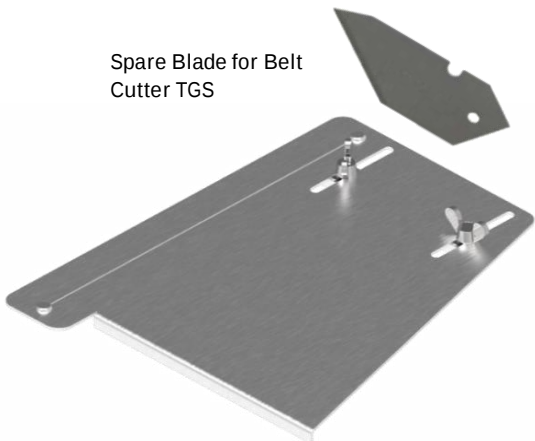
The Balertool is a small convenient hammer tool for the installation of H24 fasteners. To be used on a work bench or any flat solid base. It might be also used directly on site. The tool life might be more limited compared with Eco and Profi installation units .

Eco-Belt Lacing Set H24BS, with Connecting Pin T2F
 Belt Strength up to 520kN/m Minimum Pulley Diameter 75mm

154 mm	PU 4+	5,0 - 6,0 mm	38 001 54
165 mm	PU 4+	5,0 - 6,0 mm	38 001 30
187 mm	PU 4+	5,0 - 6,0 mm	38 001 47
198 mm	PU 4+	5,0 - 6,0 mm	38 001 61



Packing Units:
 e.g. PU 4+ includes: 4 strips of H24BS fasteners and 2 T2F connecting pins.

Description	Order No.	kg	
Pneumatic Hammer			
Pneumatic Hammer Profi including Punch L U24/H24 for use with U24/H24 Systems (see pages 6 and 9)	41 129 58 06	2.1	
Punch L U24/H24 for Pneumatic Hammer Profi including replaceable spacer ring	41 129 58 07	0.1	
			The Punch is equipped with a spacer ring. This way, the Punch can be used for system U24 (Vice Lacer Profi, page 6) as well as for system H24
Belt Cutter and More Accessories			
Belt Cutter TGS 300 (for belt widths up to 300 mm)	46 430 00 12	5.6	
Belt Cutter TGS 600 (for belt widths up to 600 mm) (no image)	42 511 06 00	9.2	
			The Portable pull cutter is used for a square cut up to 300 mm or 600 mm width. In combination with the Belt Skivers it might be used as a clamping
Spare Blade for portable Belt Cutter TGS (PU 5)	46 400 10 26	0.1	
Squaring Template BB (for belt widths 175mm-230mm)	41 129 69 50	0.3	
			The aluminum template can be used at belt width from 175 to 230. A slot will guide the belt knife when cutting the belt square.
Belt Knife (includes 5 spare blades)	42 123 00 00	0.1	
Spare Blade (PU 1) for Belt Knife	44 123 00 10	0.02	

Accessories

for High Performance Fasteners U24 / H24

Description	Order No.	kg	
Belt Edge Chamfer Tool 25	41 129 60 97	0.4	 The Chamfer Tool accurately notches the corners of the belt using guide lines.
Spare Blade for Chamfer Tool 25 (PU 10)	42 050 10 11	0.1	
Belt Skiver 18 Skiving Width 18 mm Double sided Bblade	41 129 58 27	1.0	 Belt Skiver 18
Spare Blade GH18 Double sided Blade for Belt Skiver 18 (PU 5)	41 129 58 28	0.03	
Belt Skiver 18R Skiving Width 18 mm Single sided reinforced Blade	41 130 58 27	1.0	
Spare Blade GH18R for Belt Skiver 18 R (PU 1) Single sided reinforced Blade	41 130 58 28	0.03	
Belt Skiver 25R Skiving Width 25 mm Single sided reinforced Blade	41 129 68 01	0.8	One pass with the adjustable Belt Skiver 18 reduces the belt cover leaving 5-6 mm of belt thickness. The adjustable Hold-down Device allows processing even worn belts up to a maximum of 10 mm belt thickness.
Spare Blade GH25R for Belt Skiver 25 (PU 1)	41 129 68 02	0.03	
Hammer 05 (500g, for installation of U24 Fasteners)	44 121 02 03	0.6	
Hammer 03 (300g, for installation of H24 Fasteners)	44 121 02 02	0.4	
Belt Marker	46 000 07 60	0.03	
			 Belt Marker durably marks conveyor belts. Marking depth approx. 0.8 mm, width approx. 2.0 mm

Selection Chart for Connecting Pins

for High Performance Plate Fasteners U24 / H24

The MATO Connecting Pins are aligned in design and material composition to the MATO Fasteners.

Choosing the right Connecting Pin is an important contribution to reach the optimum performance of the splice in your application.

Installation System	Fastener size / -type			Belt Width	Fastener Strip Length	Connecting Pin Length
Installation with Vice Lacer	U24AS	U24BS	U24CS	155 - 165 mm	132 mm	142 mm
				177 - 187 mm	154 mm	165 mm
	H24BS			188 - 198 mm	165 mm	175 mm
Installation with Hammer Lacer				210 - 220 mm	187 mm	197 mm
				221 - 231 mm	198 mm	208 mm
Connecting Pins	K1	K2		276 - 286 mm	253 mm	265 mm
	O1K	O2K		298 - 308 mm	275 mm	286 mm
	T1F	T2F		353 - 363 mm	330 mm	341 mm

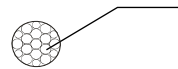
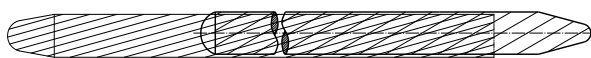
Other lengths upon request

Connecting Pins	High Tension Application	Troughing	Flexibility	No Troughing	Rust Resistant	Chemical Resistant	Wear Properties	Magnetic Properties
K1 / K2	●●●○○	●●●○○	●●●●○	●●●○○	●●●○○	○○○○○	●●○○○	stark
O1K / O2K*	●●●●○	●●●●○	●●●●○	●●●●○	●●●●○	●●○○○	●●●○○	magnetisch
T1F / T2F*	●●●●●	○○○○○	●○○○○	●●●●●	○○○○○	○○○○○	●●●●●	stark

poor ○○○○○

excellent ●●●●●

K1 / K2



High Tensile Galvanized Steel Cable

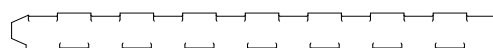
O1K / O2K



Wrap : Special Steel

Core : Stainless Chromium-Nickel Cable

T1F / T2F



Notched Spring Steel

Connecting Pins

for High Performance Fasteners U24 / H24

Description	Min. Dia.	PU / Length	Order No.	kg	
Connecting Pin T..F Notched Spring Steel					
T1F	3.0 mm	6x 175 mm	41 129 59 60	0.1	
T1F	3.0 mm	5x 208 mm	41 129 59 64	0.1	
T2F	3.4 mm	6x 142 mm	41 129 58 90	0.1	Material: Notched Spring Steel Low wear, long life time especially with conveyor belts for round balers. PU e. g. 6 x 165 mm Box content: 6 Connecting Pins 165 mm long
T2F	3.4 mm	6x 165 mm	41 129 58 92	0.1	
T2F	3.4 mm	6x 175 mm	41 129 58 08	0.1	
T2F	3.4 mm	5x 197 mm	41 129 59 09	0.1	
T2F	3.4 mm	5x 208 mm	41 129 58 16	0.1	
T2F	3.4 mm	4x 265 mm	41 129 59 11	0.1	
T2F	3.4 mm	4x 286 mm	41 129 59 18	0.1	
T2F	3.4 mm	3x 341 mm	41 129 59 19	0.1	

Connecting Pin O..K High Tensile Stainless Chromium-Nickel Stranded Cable					
O1K	3.0 mm	10 Meter	41 129 59 88	0.5	
O1K	3.0 mm	30 Meter	41 129 59 89	1.6	
O2K	3.4 mm	10 Meter	41 129 59 23	0.7	Material Core: Stainless Chromium-Nickel Cable Wrap: Special Steel Coils are supplied in 10 meter / 30 meter coils
O2K	3.4 mm	30 Meter	41 129 59 24	2.0	

Connecting Pin K.. High Tensile Galvanized Cable					
K1	3.0 mm	10 Meter	41 129 59 86	0.5	
K1	3.0 mm	30 Meter	41 129 59 87	1.4	
K2	3.4 mm	10 Meter	41 129 59 25	0.5	Material : Galvanized Steel Cable Coils are supplied in 10 meter / 30 meter coils
K2	3.4 mm	30 Meter	41 129 59 26	1.6	