

BEHAbelt[®]
Made in Germany



Welding and joining technology

Tools and useful information for thermal and mechanical
connections for belt profiles and belts made of TPU / TPE



“ Every belt is only as good as its splice.

The quality of the connection is crucial for reliable conveyor and drive systems. BEHAbelt develops welding technologies that enable precise, reproducible, and reliable results. In this brochure, we show how sophisticated tools ensure that belt connections meet the highest industrial requirements—for maximum performance and long-term operational reliability. “

CONTENT

- 03 Introduction / Industries and applications
- 04 Overview of welding tools
- 06 Hot paddles
- 09 Spare parts & accessories for hot paddles
- 10 Guide clamps / shears
- 14 Friction welding machines
- 16 Hot presses (overlap / crimp)
- 20 Overlap welding set
- 22 Welding technology for conveyor belts
- 24 Belt tensioning aid & welding rods
- 25 Connector and hook connectors
- 26 Fabrication and welding equipment rental
- 27 Overview of tutorial videos
- 28 Overview of connection types
- 29 FAQs
- 30 Mandrel Welder
- 31 Other products from BEHAbelt

Professional welding technology

Why the quality of the welded joint impacts plant performance

PU and TPE belt profiles and conveyor belts are key elements of modern conveyor and drive systems. Their performance and service life depend largely on the quality of the welded joint. High quality welding is not a minor detail, but a process step that is relevant to safety and output.

Faulty welds often lead to insufficient tensile and flexural strength, material weakening in the weld zone, and cracking or breakage of the weld seam. The consequences are unplanned machine downtime, production losses, and increased maintenance costs.

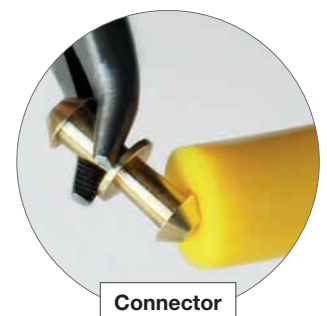
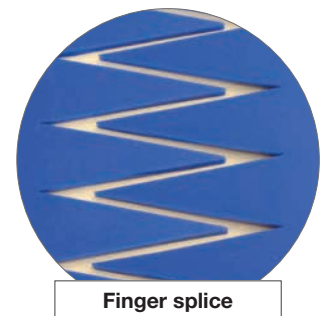
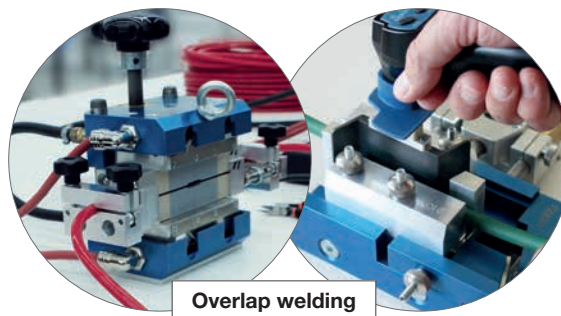
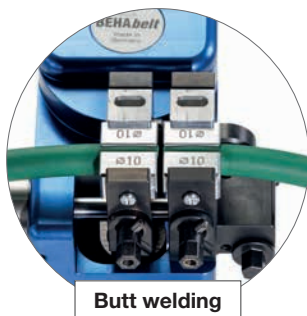
A durable welded joint can only be achieved if all relevant process parameters are precisely coordinated. The defined welding temperature, the exact alignment of the belt profiles or belt ends, and a constant, reproducible contact pressure during the joining process are crucial.

Professional welding equipment ensures that temperature control, positioning, and contact pressure are reliably maintained. In addition, a controlled cooling phase ensures that internal stresses in the material are minimized and the belt reaches its full load capacity.

WELDING AND JOINING TECHNIQUES AT A GLANCE














Depending on the belt profile, material, and application, different methods can be used:





STANDARD	THERMAL			MECHANICAL		
	OVERLAP	FINGER	ELECTRODES	CRIMP	HOOK	CONNECTORS
Standard Optional as angle splice	To reduce elongation and increase belt force	Traditional belt welding with finger punch and hot press	Manual welding with hot air gun and electrode	with crimps, inner and outer sleeves	Ideal and quick solution for kingshaft drives	Fastener with metal nipple
Unreinforced belt profiles Reinforced belt profiles Conveyor belts Belt edges Sidewalls	Reinforced belt profiles	Conveyor belts Timing belts*	Conveyor belts Container and hopper construction	Belt profiles with steel reinforcement	Twisted round belts	Hollow round belts



*see page 17

Overview of welding tools

Model	EErgo 60	EErgo 90	MultiTC	SG02	SG03
Category	Hot paddle				
					
Suitable for	TPU / TPE		TPU / TPE	TPU	TPE
Type of welding	Standard / Butt		Standard / Butt	Standard / Butt	
 Round and V-belts	✓		✓	✓	
 Round and V-belts with reinforcement	✓		✓	✓	
 Round belts with steel reinforcement (CRIMP)	✗		✗	✗	
 Special profiles	✓		✓	✓	
 Special profiles with reinforcement	✓		✓	✓	
 Sidewalls	✓		✓	✗	
 Beld edges	✗		✗	✗	
 Belts up to 80 mm	✗	✓	✓ ¹	✗	
 Belts/AT5-Belts up to 800 mm	✗		✗	✗	
 Timing belts up to 50 mm	✗		✗	✗	
Required accessories	Guide clamp		Guide clamp	Guide clamp	
For continuous operation	✓		✓	✗	
Brief description	Ergonomic hot paddle in a robust, glass fiber-reinforced housing. Fast heating time and precisely controlled temperatures with predefined buttons.		Small, handy hot paddle with continuously adjustable temperatures.	Cost-effective hot paddles, but not suitable for continuous operation. Easy to use.	

RS02 & RS02 AKKU	HP01 WATER & HP01 AIR	FZ03/1 mit EErgo-Z	HS400	HS800
Friction welding machines	Hot presses	Guide unit & Hot paddle	Joining table with heating blade	
				
TPU	TPU / TPE	TPU / TPE	TPU / TPE	
Standard / Butt	Overlap / CRIMP	Overlap	Standard / Butt	
✓	✓ ²	✓ ²	✗	
✓	✓	✓	✗	
✗	✓	✗	✗	
✓	✓ ²	Twin V-belt	✗	
✓	✓	✓	✗	
✗	✗	✗	✗	
✗	✓	✗	✗	
✗	✗	✗	✓	
✗	✗	✗	✓	
✗	✓	✗	✗	
Clamping jaws	Moulds	Clamping pieces	Adapter plates	
✓	✓	✓	✓	
Unique friction welding machine with no heating element for repeatable, precise butt welds; also available as a battery-powered version.	Mobile hot press for overlap welds with fully automated vulcanization and cooling process; also directly in the system.	Welding set for overlap welds consisting of a guide unit and Z-hot paddle.	Specially developed heating swords and joining tables for professional butt welding of conveyor belts up to a width of 800 mm.	

EERGO 60 & 90

The BEHAbelt EErgo paddle welding tools were specially developed for the connection of PU and TPE profiles or flat belt strips.

Features at a glance

- Strong, fiberglass-reinforced ergonomic housing.
- Unique control panel for one-handed operation.
- No adhesion of PU and TPE materials, thanks to Teflon-coated welding paddle.
- Easy cleaning with cloth.

Highlights



Heating-up time: approx. 5 minutes.



Innovative safety rest for safe placement on the work surface.



Ergonomic design for a natural working position.



Easy to use temperature selector regulates correct temperature to weld PU or TPE profiles.



Constant welding temperature at different ambient temperatures.



Tutorial video on YouTube

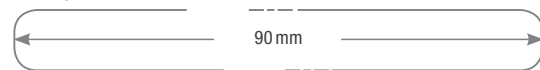


Paddle lengths

EErgo 60



EErgo 90



Scope of delivery, technical data, Order informationen, Spare parts:

- 1 pc. EErgo 60 or 90
- 1 pc. Carrying bag

EErgo 60

Dimensions: 185 x 210 x 55 mm (HxWxD)
Weight: approx. 380 g, Power: 120 W

EErgo 90

Dimensions: 185 x 240 x 55 mm (HxWxD)
Weight: approx. 420 g, Power: 120 W

Description

EErgo 60, 115V/60 mm

Order No.

FBWEE005

EErgo 90, 115V/90 mm

FBWEE020

Spare paddle EErgo 60

Dimensions (HxWxD): 43 x 65 x 6 mm

FBWEE002

Spare paddle EErgo 90

Dimensions (HxWxD): 43 x 95 x 6 mm

FBWEE025



Recommended accessories

EERGO protection kit, Combustion protection for stationary operation; consisting of holder and metal housing.

EErgo metal housing
Order No. **FBWEEZ001**

EErgo holder
Order No. **FBWEEZ002**



KS75, Bench vise with ball joint for paddle welding tools.

Fix your welding tool to facilitate stationary joining of the belt profiles easier.

KS75, Order No. **FBWKS75**



Storage stand, with magnetic base for placing of EErgo welding tool.

Note: EErgo not included in scope of delivery
Storage stand, Order No. **FBWEEZ003**



Practical EErgo Kits

EErgo-Kit „small“ 60

Welding set for small profiles: round belts up to 12 mm and V-belts up to profile 10 (Z)

- 1 pc. EErgo 60, Paddle welding tool
- 2 pcs. FZ01, Guide clamp
- 1 pc. AS02, Scissors small with prism
- 1 pc. SE02, Edge cutter
- 1 pc. Carrying case

EErgo-Kit Vario „small“ 60

Welding set for small profiles: round belts up to 12 mm and V-belts up to profile 10 (Z)

- 1 pc. EErgo 60, Paddle welding tool
- 1 pc. FZ01 Vario, Guide clamp
- 1 pc. AS02, Scissors small with prism
- 1 pc. SE02, Edge cutter
- 1 pc. Carrying case

EErgo-Kit „universal“ 60

Professional welding set for small and big profiles: Round belts in all sizes and V-belts up to profile 32x20 (D)

- 1 pc. EErgo 60, Paddle welding tool
- 2 pcs. FZ01, Guide clamp
- 1 pc. FZ02/3, Guide clamp
- 1 pc. AS04, Scissors big with angular stop
- 1 pc. SE02, Edge cutter
- 1 pc. Carrying case

EErgo-Kit Vario „universal“ 60

Professional welding set for small and big profiles: Round belts in all sizes and V-belts up to profile 32x20 (D)

- 1 pc. EErgo 60, Paddle welding tool
- 1 pc. FZ01 Vario, Guide clamp
- 1 pc. FZ02/3, Guide clamp
- 1 pc. AS04, Scissors big with angular stop
- 1 pc. SE02, Edge cutter
- 1 pc. Carrying case

EErgo-Kit „big“ 60

Welding set for large profiles: round belts from 8 mm and V-belts from 8x5 (M) to 32x20 (D)

- 1 pc. EErgo 60, Paddle welding tool
- 1 pc. FZ02/3, Guide clamp
- 1 pc. AS04, Scissors big with angular stop
- 1 pc. SE02, Edge cutter
- 1 pc. Carrying case

Order information:

Description	Order No.
EErgo-Kit „small“ 115V / 60 mm	FBWEE006
EErgo-Kit Vario „small“ 115V / 60 mm	FBWEE013
EErgo-Kit „universal“ 115V / 60 mm	FBWEE007
EErgo-Kit Vario „universal“ 115V / 60 mm	FBWEE015
EErgo-Kit „big“ 115V / 60 mm	FBWEE044



Description	EErgo 60	FZ01	FZ01 Vario	FZ02/3	AS02	AS04	SE02	Carrying Bags
EErgo-Kit „small“	1	2			1		1	1
EErgo-Kit Vario „small“	1		1		1		1	1
EErgo-Kit „universal“	1	2		1		1	1	1
EErgo-Kit Vario „universal“	1		1	1		1	1	1
EErgo-Kit „big“	1			1		1	1	1

Multi TC

BEHbelt Multi TC is the proven continuously adjustable paddle welding tool for polyurethane and polyester.

Product characteristics

- Easy and safe handling.
- Very fast heating-up period.
- Variable temperature setting through adjusting wheel.
- Continuous welding temperature through temperature control even at long-term operation.
- LED display for signal of optimum welding temperature.
- Small, handy, and robust welding tool.
- Teflon coated welding paddle.
- Easy cleaning with cloth.



Scope of delivery, technical data:

1 pc. Multi TC hot paddle welding tool
 Temperature-controlled welding tool for two temperature ranges: PU 290 °C / Polyester 240 °C

Dimensions: 295 x 35 x 25 mm (HxWxD)
 Weight: approx. 250 g
 Heating time: approx. 5 minutes
 Temperature range: continuously 200...300 °C
 Power: 75 W

Order information, Spare parts:

Description	Order No.
Multi TC 230 V (Not available as a 115 V version)	FBWMT230
Spare paddle MultiTC Dimensions (HxWxD): 35 x 35 x 2 mm	FBWMT1
Spare paddle MultiTC for flat belts Dimensions (HxWxD): 25 x 70 x 2 mm	FBWMT2

SG02 / SG03

**The cost-effective welding technology.
 SG02 for PU or SG03 for TPE**

Product characteristics

- Easy and safe operation.
- Fixed, unregulated temperature setting.
- Reaches the welding temperature after approx. 10 min.
- Small, convenient and tough welding tool.
- No adhesion of PU and TPE materials, thanks to Teflon-coated welding paddle.
- Easy to clean with a cotton cloth.

Caution! Not suitable for continuous use.



Order information, Spare parts:

SG02 PU - 230 V	FBWSG02
SG03 TPE - 230 V (Not available as a 115 V version)	FBWSG03
Spare paddle for SG02 or SG03 Dimensions (HxWxD): 35 x 35 x 2 mm	FBWTC72
Spare paddle for SG02 or SG03 for flat profiles Dimensions (HxWxD): 22,5 x 75 x 2 mm	FBWTC76

Scope of delivery, technical data:

1 pc. SG02 hot paddle welding tool
 for Polyurethane (PU) 280 - 290 °C

or

1 pc. SG03 hot paddle welding tool
 for Polyester (TPE) 225 - 240 °C

Dimensions: 280 x 33 x 33 mm (HxWxD)
 Weight: approx. 227 g
 Heating time: approx. 10 minutes
 Power: 80W (SG02); 40W (SG03)

Spare parts & accessories for hot paddles



Paddle (MultiTC)

Spare paddle for profiles
for welding tool „MultiTC“

Dimensions (HxWxD):
35 x 35 x 2 mm

Description	Order No.
Spare paddle MultiTC	FBWMTc1



Paddle (MultiTC)

Spare paddle for flat profiles
for welding tool „MultiTC“

Dimensions (HxWxD):
25 x 70 x 2 mm

Description	Order No.
Spare paddle MultiTC	FBWMTc2



Paddle (SG02/03)

Spare paddle for profiles
for welding tools „SG02/03“

Dimensions (HxWxD):
35 x 35 x 2 mm

Description	Order No.
Spare paddle SG02/03	FBWTC72



Paddle (SG02/03)

Spare paddle for flat profiles
for welding tools „SG02/03“

Dimensions (HxWxD):
22,5 x 75 x 2 mm

Description	Order No.
Spare paddle SG02/03	FBWTC76



Paddle (EErgo 60)

Spare paddle for profiles
for welding tool „EErgo 60“

Dimensions (HxWxD):
43 x 60 x 6 mm

Description	Order No.
Spare paddle EErgo 60	FBWEE002



Paddle (EErgo 90)

Spare paddles for flat profiles
for welding tool „EErgo 90“

Dimensions (HxWxD):
43 x 90 x 6 mm

Description	Order No.
Spare paddle EErgo 90	FBWEE025



Paddle (EErgo-Z)

Spare paddle Z for
paddle welding tool „EErgo“

Dimensions (HxWxD):
approx. 100 x 65 x 6 mm

Description	Order No.
Spare paddle EErgo-Z	FBWEE024



EErgo protection kit

Combustion protection for
stationary operation

Consisting of holder and metal housing

Description	Order No.
EErgo Housing	FBWEEZ001
EErgo Holder	FBWEEZ002



KS75

Bench vise with ball joint
for paddle welding tools

Fix your welding tool to facilitate
stationary joining of the belt profiles
easier.

Description	Order No.
KS75	FBWKS75































Storage Stand

Storage stand with magnetic base
for placing of EErgo welding tool

Note: EErgo not included in scope of
delivery

Description	Order No.
Storage Stand	FBWEEZ003

Overview guide clamps

Model	FZ02/3	FZ02/3F	FZ02/3W	FZ01	FZ01 Vario
					
Type of welding	Standard / Butt	Standard / Butt	Standard / Butt	Standard / Butt	Standard / Butt
 Round belts	from \varnothing 8 mm			up to \varnothing 12 mm	up to \varnothing 12 mm
 V-belts	8x5 (M)...32x20 (D)			up to 10x6 (Z)	up to 10x6 (Z)
 Special profiles	Corresponding adapter inserts available	Corresponding adapter inserts available			Corresponding adapter inserts available
 Flat profiles		Max. 80 mm width 1.6...5 mm height			
 Sidewalls			max. 50 mm Height		
 Beld edges	Corresponding adapter inserts available				Corresponding adapter inserts available
Brief description	Robust guide clamp with a wide range of applications	Guide clamp specially designed for flat profiles	Guide clamp specifically for sidewalls	Cost-effective guide clamp for standard profiles	Well-designed guide clamp with automatic contact pressure

Overview of scissors/cutters

Model	AS02	AS03	AS04	SE02	SZ01
					
Brief description	Small scissors with prism up to profile height 10 mm	Large scissors with stop	Large scissors with angle stop	Bead cutter with special grinding	Pliers for fitting connectors
Cutting types / Application	90° cut	90° and miter cuts	45°, 60°, 75°, 90°, 105°, 120°, and 135° cuts	for removing the welding bead	for pressing in the connectors

FZ02/3

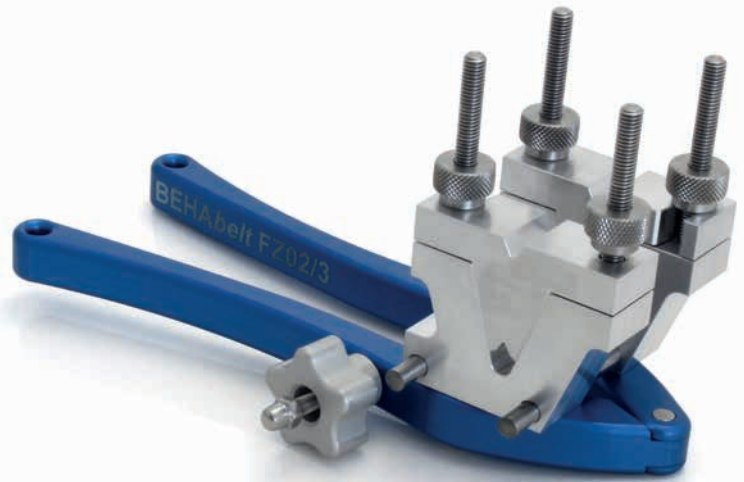
Guiding clamp FZ02/3 Standard

Robust and precise for V-belts from 8x5 (M) to 32x20 (D) and round belts from \varnothing 8 mm.

Adapter inserts for special profiles

Available geometries in mm: 12.5x5, 15x5, 16x8, 18x6, 24x6.8, 25x5, 30x8, 38x2, 6x4x9, 21x8, 28x10, flat profiles, square profiles, U-profiles, T-profiles 10x6, 28x10.

Other geometries available on request.



For 90° welding



Tutorial video
on YouTube

Twin V-belt

Adapter set FZ02/3 for Twin V-belt 12x4,8 mm	FBWFZ020T01
Adapter set FZ02/3 for CornBelt-Profile 8x33 mm	FBWFZ020T18
Adapter set FZ02/3 for Twin 3L 24x6,8 mm	FBWFZ020T02
Adapter set FZ02/3 for Twin-A 30x8 mm	FBWFZ020T03

Belt edges

Adapter set FZ02/3 for belt edge 10x35 mm	FBWFZ020T30
Adapter set FZ02/3 for belt edge 10x35 mm	FBWFZ020T29
Adapter set FZ02/3 for belt edge 14x28 mm	FBWFZ020T21
Adapter set FZ02/3 for belt edge 3,5x37 mm	FBWFZ020T31
Adapter set FZ02/3 for belt edge 16,5x33 mm	FBWFZ020T33
Adapter set FZ02/3 for belt edge 8,8x18 mm	FBWFZ020T34
Adapter set FZ02/3 for belt edge 17x33 mm	FBWFZ020T35
Adapter set FZ02/3 for belt edge 10,5x22 mm	FBWFZ020T36

T-Profiles

Adapterset FZ02/3 for T-Profile 15x5 mm	FBWFZ020T14
Adapterset FZ02/3 for T-Profile 20x20 mm	FBWFZ020T20
Adapterset FZ02/3 for T-Profile 20x8 mm	FBWFZ020T05
Adapterset FZ02/3 for T-Profile 25x5 mm	FBWFZ020T06
Adapterset FZ02/3 for T-Profile 9x4 mm	FBWFZ020T07

Further adapters available on request

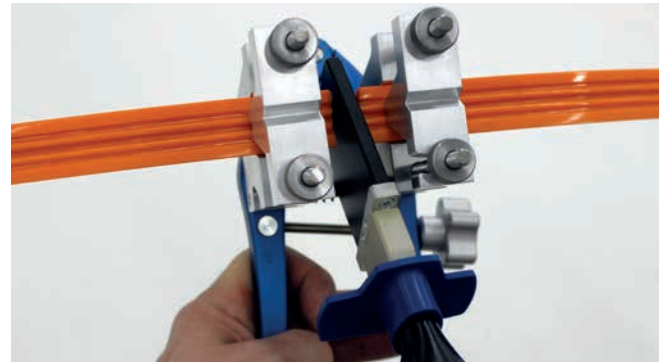


Technical data:

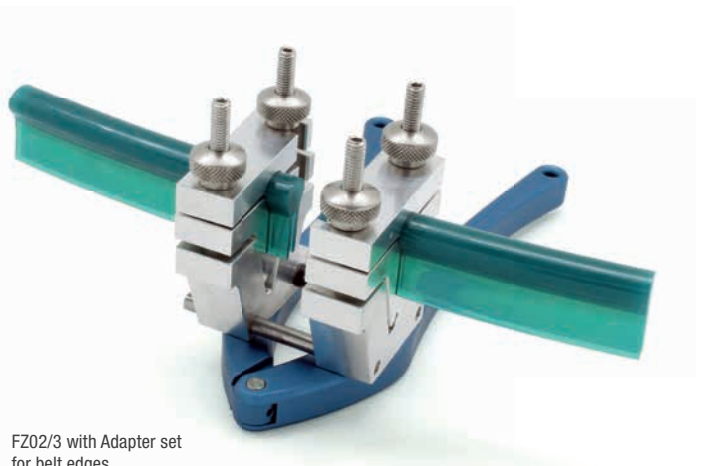
Dimensions: 205 x 90 x 100 mm (HxWxD)
Weight: approx. 617 g

Order information, Spare parts:

Description	Order No.
Guiding clamp FZ02/3 incl. Standard adapter insert	FBWFZ02/3
Adapter insert for special profiles	FBWFZ020T0
Replacement knurled nut M6 metal	MDFZ01003



Recommended for use with EErgo 60



FZ02/3 with Adapter set
for belt edges

FZ02/3F

Guiding clamp FZ02/3F for flat profiles

Robust and accurate for flat and special profiles.
Width max. 80 mm and Height 1,6 - 5 mm.

Adapter inserts for special profiles

Special profiles with a width > 40 mm
and flat strips with V-guide.



Tutorial video
on YouTube

Technical data:

Dimensions: 205 x 90 x 100 mm (HxWxD)
Weight: approx. 617 g

Order information:

Description	Order No.
Guide clamp FZ02/3F	FBWFZ02/3F
Replacement knurled nut M6 metal	MDFZ01003



Recommended for use with E Ergo 90

FZ02/3W

Guide clamp FZ02/3W for BEHAbelt Sidewalls

Precisely adjusted to the division and
undulation up to a height of 50 mm.

Order information:

Description	Order No.
Guide clamp FZ02/3W	FBWFZ020T22



FZ01

Guide clamp for round and V-belts

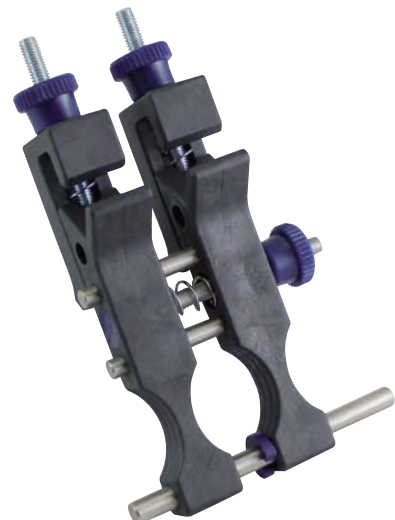
Handy and lightweight for round belts up to
 \varnothing 12 mm and V-belts up to profile 10 (Z).

Technical data:

Dimensions: 127 x 70 x 35 mm (HxWxD)
Weight: approx. 140 g

Order information:

Description	Order No.
Guide clamp FZ01	FBWFZ01
Replacement knurled nut M5 plastic	MDFZ01001

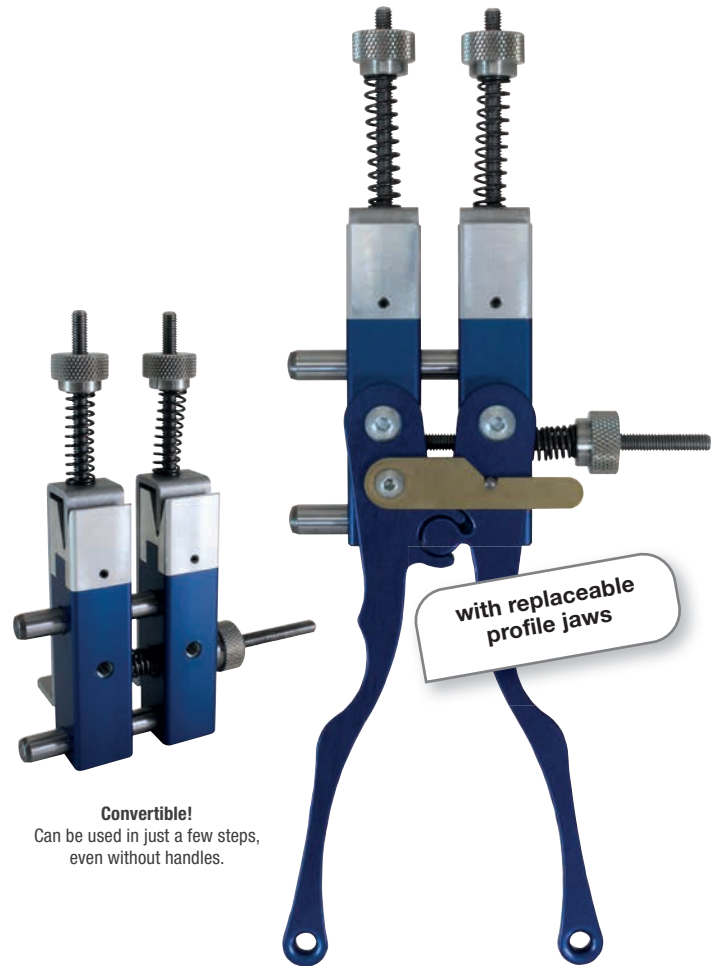


FZ01 Vario

Highly comfortable FZ01 Vario guide clamp with automatic contact pressure for standard and special profiles

Product characteristics

- Handy and robust for round belts up to \varnothing 12 mm and V-belts up to profile 10 (Z).
- Special profiles can be processed thanks to the interchangeable profile jaws.
- Fast, secure, and particularly precise end splicing of PU and TPE profiles.
- Special inserts for: V-ribbed belts PJ2, PJ3, and PJ4.
- Additional profile jaws available on request.



Convertible!
Can be used in just a few steps, even without handles.

with replaceable profile jaws

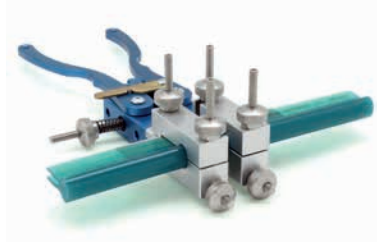


Tutorial video on YouTube

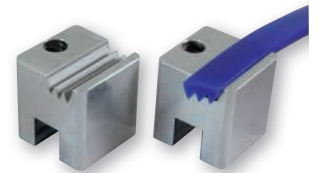
Technical data:

Dimensions: 240 x 125 x 50 mm
140 x 195 x 50 mm without handle

Weight: approx. 365 g
approx. 320 g without handle



FZ01 Vario with profile jaws for belt edges



Profile jaws for special profiles

Order information:

Description	Order No.
FZ01 Vario	FBWFZ01V
Profile jaws PJ2/PJ3/PJ4	FBWPBPJ2-4
Profile jaws T-Profile 10x4,5	FBWPBT10x45
Profile jaws T-Profile 9,5x3,5	FBWPBT95x35
Replacement knurled nut M5 metal	MDFZ01002



Quick clamp device for inserting the profiles in exchangeable profile jaws.



Automatic unlocking starts off lateral pressure.



Precise welding thanks to constant pressure.



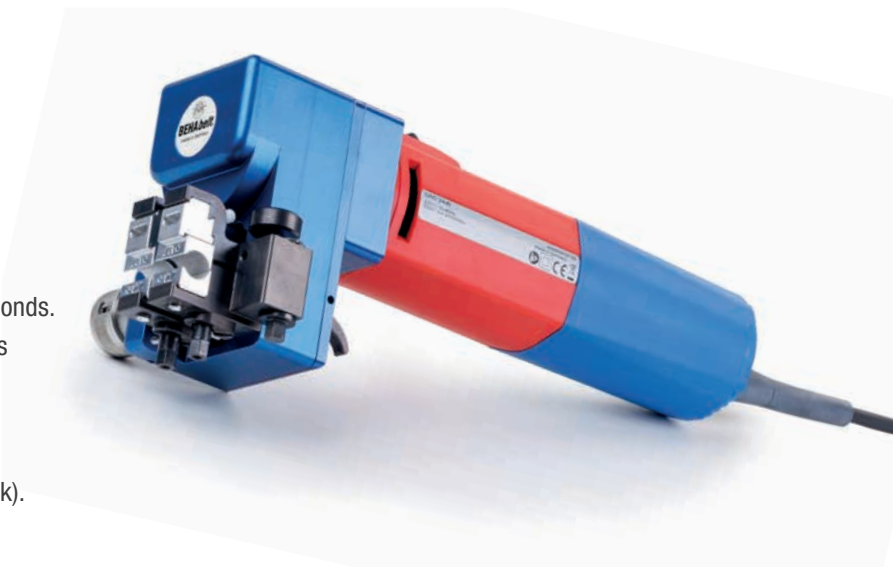
Remove welding bead with side cutter.

RS02

Unique RS02 friction welding machine for polyurethane profiles prevents downtime by ensuring perfect welding in every application.

Product characteristics

- No long heating-up and set-up times, spliced within seconds.
- Precise pressure and automatical 0-positioning prevents uneven welds and premature failure.
- Automatic alignment ensures that the belt ends are aligned perfectly.
- Temperature variation is never a concern (no guess-work).
- Without the risk of injury or fire due to hot metal.
- Due to its small size the RS02 press can be used in confined spaces.
- Thanks to its exchangeable jaws the RS02 is suitable for splicing round belts from \varnothing 6 mm and V-belts from 6x4mm made of polyurethane.



Scope of delivery, technical data:

1 pc. Friction welding machine RS02, 1 set Standard profile jaws at your choice, 1 pc. Torque wrench, 1 pc. Scissors AS02, 1 pc. Edge cutter SE02, 1 pc. Carrying case with hard foam insert

Dimensions: 390 x 105 x 123 mm (HxWxD)

Weight: approx. 2450 g

Power: 500 W

Order information:

Description
RS02, 115V

Order No.
FBWRS022115V



Tutorial video on YouTube

RS02 AKKU

Battery-operated friction welding machine for polyurethane profiles for improved high-mobility maintenance.

Product characteristics

Same as RS02, but with the following differences

- Cordless; battery-operated
- Larger scope of delivery



Charger

Battery pack

Scope of delivery, technical data:

1 pc. Friction welding machine RS02 AKKU, 1 set Standard profile jaws at your choice, 1 pc. Torque wrench, 1 pc. Scissors AS04, 1 pc. Edge cutter SE02, 2 pc. Battery pack, 1 pc. Charger, 1 pc. Assortment box, 1 pc. Carrying case with hard foam insert

Dimensions: 420 x 105 x 123 mm (HxWxD)

Weight: approx. 2960 g

Power: 18V 5Ah

Order information:

Description
RS02 AKKU, 115V

Order No.
FBWRS02A115

Aluminum clamping jaws

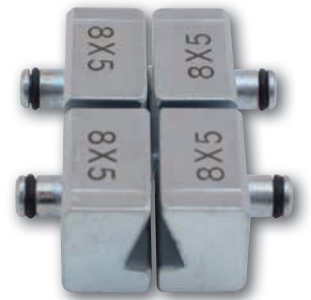
1 set of clamping jaws for RS02 consists of 4 parts each

Product characteristics

- Please note each belt profile requires a matching set of jaws.
- Therefore, please select the appropriate clamping jaws for the required profile geometry.
- **On request, we also manufacture clamping jaws for PU special profiles.**



for round belts



for V-belts

Round belts

RS Clamping jaws round belt Ø 6,0 mm	FBWSBR060
RS Clamping jaws round belt Ø 6,3 mm	FBWSBR063
RS Clamping jaws round belt Ø 7,0 mm	FBWSBR070
RS Clamping jaws round belt Ø 7,9 mm	FBWSBR079
RS Clamping jaws round belt Ø 8,0 mm	FBWSBR080
RS Clamping jaws round belt Ø 9,0 mm	FBWSBR090
RS Clamping jaws round belt Ø 9,5 mm	FBWSBR095
RS Clamping jaws round belt Ø 10,0 mm	FBWSBR100
RS Clamping jaws round belt Ø 12,0 mm	FBWSBR120
RS Clamping jaws round belt Ø 12,5 mm	FBWSBR125
RS Clamping jaws round belt Ø 12,7 mm	FBWSBR127
RS Clamping jaws round belt Ø 13,0 mm	FBWSBR130
RS Clamping jaws round belt Ø 14,0 mm	FBWSBR140
RS Clamping jaws round belt Ø 14,3 mm	FBWSBR143
RS Clamping jaws round belt Ø 15,0 mm	FBWSBR150
RS Clamping jaws round belt Ø 15,9 mm	FBWSBR159
RS Clamping jaws round belt Ø 17,0 mm	FBWSBR170
RS Clamping jaws round belt Ø 18,0 mm	FBWSBR180
RS Clamping jaws round belt Ø 19,0 mm	FBWSBR190
RS Clamping jaws round belt Ø 20,0 mm	FBWSBR200

V-belts

RS Clamping jaws V-belt (Y) 6x4 mm	FBWSBK06
RS Clamping jaws V-belt (M) 8x5 mm	FBWSBK08
RS Clamping jaws V-belt (Z) 10x6 mm	FBWSBK10
RS Clamping jaws V-belt (A) 13x8 mm	FBWSBK13
RS Clamping jaws V-belt (B) 17x11 mm	FBWSBK17
RS Clamping jaws V-belt (C) 22x14 mm	FBWSBK22

V-belts special versions

RS Clamping jaws V-belt 8x6,5 mm	FBWSBK8X65
RS Clamping jaws V-belt 10x8 mm	FBWSBK10X8
RS Clamping jaws SuperGrip (Z) 10x6 mm	FBWSBK10G
RS Clamping jaws SuperGrip (A) 13x8 mm	FBWSBK13G
RS Clamping jaws SuperGrip (B) 17x11 mm	FBWSBK17G
RS Clamping jaws SuperGrip (C) 22x14 mm	FBWSBK22G
RS Clamping jaws (B) 17x11 for brush 90°	FBWSBK17B
RS Clamping jaws (C) 22x14 for brush 90°	FBWSBK22B

Ridge top V-belts

RS Clamping jaws SK1 (B) 17x19 mm	FBWSBK17X19
RS Clamping jaws SK1 (C) 22x24 mm	FBWSBK22X24
RS Clamping jaws SK2 (B) 17x21 mm	FBWSBK17X21
RS Clamping jaws SK2 (C) 22x25 mm	FBWSBK22X25

Twin V-belts

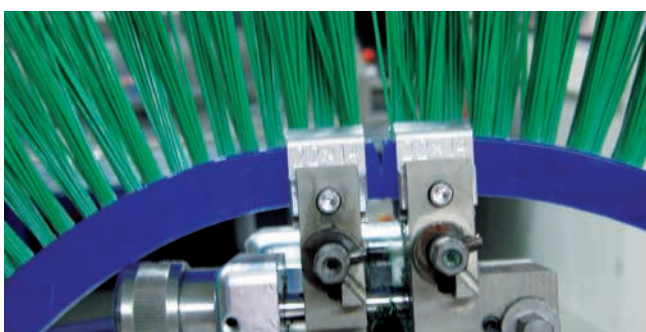
RS Clamping jaws Twin V-belt 21x8 mm	FBWSBK21X8
RS Clamping jaws Twin V-belt (Z) 24x6,8 mm	FBWSBK24X68
RS Clamping jaws Twin V-belt 30x8 mm	FBWSBK30X8

T-Profiles

RS Clamping jaws T-Profile 15x5 mm	FBWSBST15X5
RS Clamping jaws T-Profile 5x5x25 mm	FBWSBST5525

Special profiles

RS Clamping jaws Square profile 11,8x11,8 mm	FBWSBSQ118
RS Clamping jaws U-Profile 18x11,8 mm	FBWSBSU180
RS Clamping jaws Prism V-belt 33x8 mm	FBWSBS33X8
RS Clamping jaws Peach profile 28x29 mm	FBWSBS28X29



HP01 AIR

The HP01 AIR is the air-cooled version of the hot press and offers mobility thanks to its compact design.

Product characteristics

- Very easy to use.
- Reduces operator errors through a fully automatic and controlled welding and vulcanization process.
- Thanks to its exchangeable molds (sold separately) the HP01 is suitable for splicing many different profiles and flat belts made of PU and TPE as well as timing belts.
- User friendly operation through self-explanatory menu of controller (no expertise required).
- Perfect welding within minutes.
- Temperature variation is never a concern (no guesswork).
- Real time data logging & diagnostics function for quality assurance of the splice.
- Different types of welds possible (overlap welds, butt welds and angle welds).
- Due to its small size and the hook for hanging up the press during the welding process, the HP01 can be used in confined spaces "on-site".
- Best welding solution for reinforced profiles (aramid, polyester and steel) through overlap welding.



Scope of delivery, technical data:

1 pc. Hot press HP01 AIR, 1 pc. PPuls Controller Element,
1 pc. Edge cutter SE02, 1 pc. Screw driver,
1 pc. Scissors AS04, 1 pc. Aluminium case

Dimensions: 240 x 167 x 200 mm (HxWxD)

Heating plate dimensions: 120 x 60 mm

Weight: approx. 4800 g



Tutorial video on YouTube

Order information:

Description
Standard Set HP01 / Air cooling, 115V

Order No.
FBWHP011L115

HP01 WATER

HP01 WATER is the water cooled version of the hot press and offers higher cooling capacity.

Product characteristics

Like HP01 AIR, it differs in the following features

- Higher cooling capacity
- Cooling barrel with connecting hoses included in delivery (special lengths available on request)
- Can also be cooled with compressed air if necessary

Scope of delivery, technical data:

1 pc. Hot press HP01 WATER, 1 pc. PPuls Controller Element,
1 pc. Cooling unit 6,4 l with pump, 1 pc. Edge cutter SE02,
1 pc. Screw driver, 1 pc. Scissors AS04,
1 Set Connecting hoses, 1 pc. Aluminium case

Dimensions: 240 x 167 x 200 mm (HxWxD)

Heating plate dimensions: 120 x 60 mm

Weight: approx. 4800 g



Order information:

Description
Standard Set HP01 / Water cooling, 115 V

Order No.
FBWHP011W115

MOLDS FOR HP01 HOT PRESSES

For round and V-belts made of PU and TPE as well as other geometries. Other sizes available on request.



Mold for Twin V-belt

Round belts

Mold Ø 6,0 mm	FBWFS060
Mold Ø 6,3 mm	FBWFS063
Mold Ø 7,0 mm	FBWFS070
Mold Ø 8,0 mm	FBWFS080
Mold Ø 9,5 mm	FBWFS095
Mold Ø 10,0 mm	FBWFS100
Mold Ø 12,0 mm	FBWFS120
Mold Ø 12,5 mm	FBWFS125
Mold Ø 14,3 mm	FBWFS143
Mold Ø 15,0 mm	FBWFS150
Mold Ø 18,0 mm	FBWFS180
Mold Ø 20,0 mm	FBWFS200

V-belts

Mold (Z) 10x6 mm	FBWFS100X060
Mold (A) 13x8 mm	FBWFS130X080
Mold (B) 17x11 mm	FBWFS170X110
Mold (C) 22x14 mm	FBWFS220X140

V-belt special version

Mold 8x6,5 mm vaulted top	FBWFS080X065
Mold 10x8 mm	FBWFS100X080
Mold 16,35x11,3 mm (bluepower)	FBWFS163X113
Mold 17x11,3 mm (bluepower)	FBWFS170X113

Timing belts (width max. 50 mm)

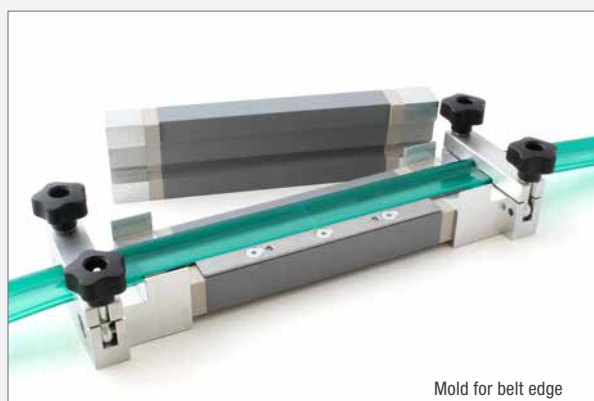
Mold for timing belt HTD5	FBWFZHTD5MN
Mold for timing belt HTD8	FBWFZHTD8MN
Mold for timing belt T5	FBWFZT5N
Mold for timing belt T10	FBWFZT10N
Mold for timing belt AT5	FBWFZAT5N
Mold for timing belt AT10	FBWFZAT10N
Mold for timing belt AT20	FBWFZAT20N
Mold for timing belt H (B: 50,8 mm/2")	FBWFZH0
Mold for timing belt L (B: 50,8 mm/2")	FBWFZL0
Mold for timing belt RPP 8M	FBWFZRPP8MN



Mold for timing belt

Belt edge special version

Mold 14x28 mm	FBWFS14X28
---------------	------------



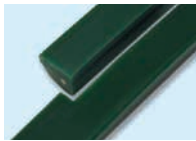
Mold for belt edge



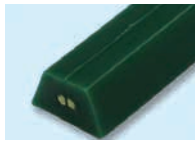
We would be happy to check the realisation for your belt edge profile.

SH01

Designed to accurately cut and prepare reinforced profiles for overlap welding with the BEHAbelt HP01 hot press.



Before overlap welding



After overlap welding



Profile adapters for round belts

Description	Dimensions (mm)	Order No.
Profile adapter for round belts	∅ 6,0	FBWSH1R060
Profile adapter for round belts	∅ 6,3	FBWSH1R063
Profile adapter for round belts	∅ 8,0	FBWSH1R080
Profile adapter for round belts	∅ 9,5	FBWSH1R095
Profile adapter for round belts	∅ 10,0	FBWSH1R100
Profile adapter for round belts	∅ 12,0	FBWSH1R120
Profile adapter for round belts	∅ 12,5	FBWSH1R125
Profile adapter for round belts	∅ 15,0	FBWSH1R150
Profile adapter for round belts	∅ 18,0	FBWSH1R180
Profile adapter for round belts	∅ 20,0	FBWSH1R200

Scope of delivery, technical data:

1 pc. Belt cutter SH01, 1 pc. Screw driver
1 pc. Profile adapter at your choice, 1 pc. End wrench
1 set Washers

Dimensions (HxWxD): 200 x 80 x 45 mm
Weight: approx. 1,3 kg

Order information:

Description	Order No.
Belt cutter SH01 with 1 profile adapter at your choice	FBWSH1

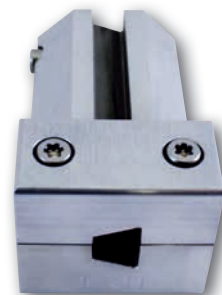
Profile adapters for V-belts

Order No.	Description	Dimensions (mm)
FBWSH1K10	Profile adapter for V-belts	10 x 6 (Z)
FBWSH1K13	Profile adapter for V-belts	13 x 8 (A)
FBWSHSK17BP	Profile adapter for V-belts bluepower	17 x 11,3
FBWSH1K17	Profile adapter for V-belts	17 x 11 (B)
FBWSH1K22	Profile adapter for V-belts	22 x 14 (C)

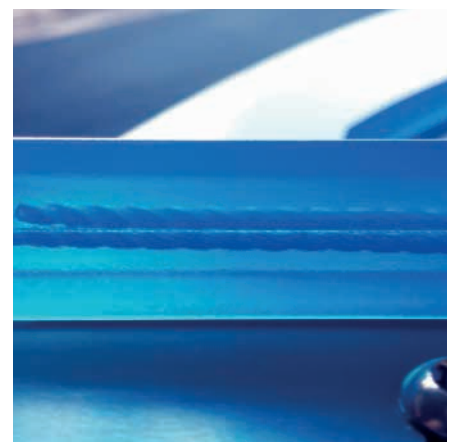
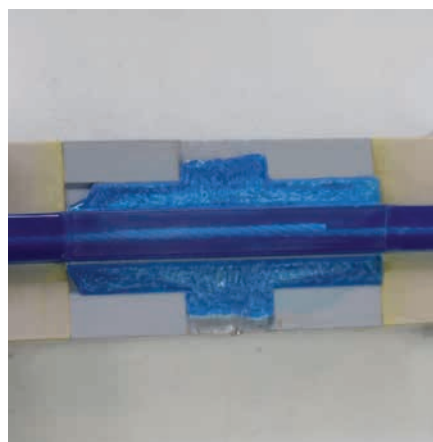
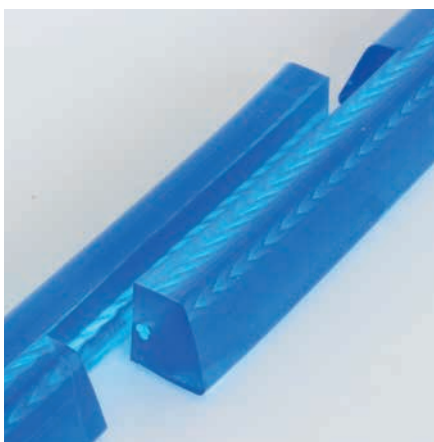
Profile adapters for special profiles on request



Profile adapter
for round belts



Profile adapter
for V-belts



CRIMP-SET RH-2

This improved CRIMP* technology enables steel-reinforced belt profiles to be connected with even greater process reliability.



Canning industry: Crimp Connection

A special design is the connection of belts with steel reinforcement. Here, the exposed reinforcement is connected with press sleeves and the resulting gap in the connection point is then filled again with material inserts/welding sleeves. Using a profile Mold and a hot press, the splice zone is then filled up and welded by pressure and temperature to the rest of the belt.

Our RH-2 joining set is available for this purpose and provides you with the complete equipment and material for creating such a splice.



Carrying bag



CU crimps



The inner and outer sleeves are delivered by the metre.



Cable stripper cutter



Stripping hook



Tutorial video on YouTube

Scope of delivery:

1 pc. Carrying bag, 1 pc. Crimping tool RH-2, 1 pc. Cable stripper, 1 pc. Stripping hook, 3 m polyester cover inserts (outside/inside), 100 pc. CU crimps

Order information:

Description	Order No.
Crimp-Set RH-2 Ø 9,5 mm	FBWRH2SET095
Crimp-Set RH-2 Ø 12,5 mm	FBWRH2SET125



Crimping tool RH-2



1. Join exposed reinforcement with press sleeves



2. Fill the gap with material inserts



3. Positioning of the unwelded splice into the Mold



4. Profile joined by hot press

* Ferrules

FZ03/1 & EErgo Z

Overlap welding set with Z-paddle consisting of guide unit and hot paddle

Product characteristics FZ03/1

- Professional and easy to use guide clamps for overlap welding of reinforced profiles.
- Completely tool-free adjustment of the welding position for welding with Z-paddle.
- Uniform contact pressure over the entire welding surface of the profile for perfect welding quality
- Application range for round belts from Ø 6-20mm and for V-belts from 8x5mm to 32x20mm.
- Safe handling with high repeat accuracy of the welding position thanks to toggle lever.
- Scope of delivery includes assembly option with table mounting and vice.
- Unique contact pressure in radial and axial alignment!

Product characteristics EErgo-Z

- Robust, fibreglass-reinforced and ergonomic handle.
- Special Z-paddle for overlap welding with guide clamp FZ03/1.
- Correct temperature setting thanks to predefined buttons per welding material (PU 280 °C / Polyester 240 °C).
- Precise and stable temperature control for avoidance of temperature fluctuations under different welding conditions
- No adhesion of PU and TPE material thanks to Teflon-coated welding paddle
- Matching magnetic storage stand for safe storage of the welding paddle even when welding in the system

Scope of delivery, technical data:

1 pc. FZ03/1-Set consisting of: FZ03/1, EErgo Z, Storage stand with magnetic base, AS04, SE02, 1 set of clamping pieces of your choice, table mounting, Carrying case, Instruction manual)

FZ03/1-Set

Dimensions (HxWxD): 350 x 550 x 210 mm
Weight: approx. 8,0 kg

EErgo-Z

Dimensions (HxWxD): 210 x 210 x 55 mm
Weight: approx. 450 g, Leistung: 240 W

FZ03/1 Guide unit

Dimensions (HxWxD): 70 x 210 x 250 mm
Weight: approx. 3,3 kg

Order information:

Description

FZ03/1-Set

EErgo-Z, 115V

FZ03/1 Guide unit

Spare paddle EErgo-Z

Dimensions (HxWxD): 100 x 65 x 6 mm

Order No.

FBWFZ03/1A

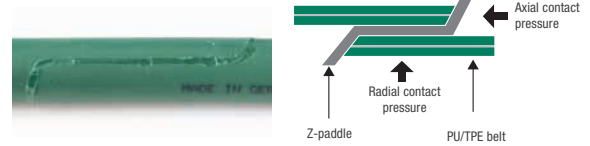
FBWEE027

MBWFZ03/1A

FBWEE024



PRINCIPLE OF OPERATION



Compact guide unit for overlap welding by means of Z-paddle with vertical and horizontal contact pressure



Hot paddle welding tool EErgo with Z-paddle



Clamping pieces for FZ03/1

1 set of clamping pieces consists of 2 parts

Product characteristics

- Please note each belt profile requires a matching set of clamping pieces.
- Therefore, please select the appropriate clamping pieces for the required profile geometry.
- On request, we also manufacture clamping pieces for PU special profiles.



für round belts



für V-belts

Round belts

Clamping piece for FZ03/1 Ø 6,0 mm	FBWKS1R060
Clamping piece for FZ03/1 Ø 6,3 mm	FBWKS1R063
Clamping piece for FZ03/1 Ø 7,0 mm	FBWKS1R070
Clamping piece for FZ03/1 Ø 7,9 mm	FBWKS1R079
Clamping piece for FZ03/1 Ø 8,0 mm	FBWKS1R080
Clamping piece for FZ03/1 Ø 9,5 mm	FBWKS1R095
Clamping piece for FZ03/1 Ø 10,0 mm	FBWKS1R100
Clamping piece for FZ03/1 Ø 12,0 mm	FBWKS1R120
Clamping piece for FZ03/1 Ø 12,5 mm	FBWKS1R125
Clamping piece for FZ03/1 Ø 12,7 mm	FBWKS1R127
Clamping piece for FZ03/1 Ø 13,0 mm	FBWKS1R130
Clamping piece for FZ03/1 Ø 14,0 mm	FBWKS1R140
Clamping piece for FZ03/1 Ø 14,3 mm	FBWKS1R143
Clamping piece for FZ03/1 Ø 15,0 mm	FBWKS1R150
Clamping piece for FZ03/1 Ø 15,9 mm	FBWKS1R159
Clamping piece for FZ03/1 Ø 17,0 mm	FBWKS1R170
Clamping piece for FZ03/1 Ø 18,0 mm	FBWKS1R180
Clamping piece for FZ03/1 Ø 19,0 mm	FBWKS1R190
Clamping piece for FZ03/1 Ø 20,0 mm	FBWKS1R200

V-belts

Clamping piece for FZ03/1 (M) 8x5 mm	FBWKS1K8
Clamping piece for FZ03/1 (Z) 10x6 mm	FBWKS1K10
Clamping piece for FZ03/1 (A) 13x8 mm	FBWKS1K13
Clamping piece for FZ03/1 (B) 17x11 mm	FBWKS1K17
Clamping piece for FZ03/1 (C) 22x14 mm	FBWKS1K22
Clamping piece for FZ03/1 (D) 32x20 mm	FBWKS1K32

Twin V-belts

Clamping piece for FZ03/1 30x8 mm (TwinA)	FBWKS1K30
---	-----------



In the upper part of the transport bag there is a generally usable space for the side cutter SE02 and free compartments for 9 optional clamping piece pairs.



Robust transport case for the overlap welding set FZ03/1.

HS400 & 800

Specially developed hot paddles for butt welding of conveyor belts. The design of the welding device allows easy and professional handling.

Product characteristics

- HS400 for up to 400 mm belt width
- HS800 for up to 800 mm belt width
- Sophisticated design with positioning aids and stoppers ensures highly repeatable accuracy of weldings
- Clamping lever with locking device
- Robust and handy design of the individual components
- Exact temperature adjustment via control unit
- No adhesion of PU or TPE material due to Teflon-coated heating paddle
- Easy cleaning of the heating blade with a cotton cloth
- Reduced risk of injury during cutting due to practical cutting device
- Welding unit delivered in a mobile, stable transport box for easy use on site
- Smallest weldable belt length $L_f = 800$ mm



HS400S / HS800S

Special design for short belt lengths from $L_f = 500$ mm



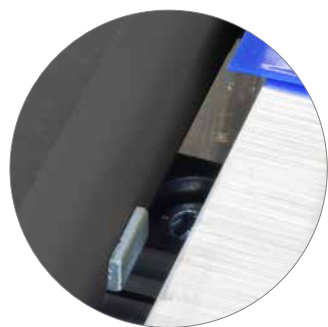
Tutorial video on YouTube

Scope of delivery:

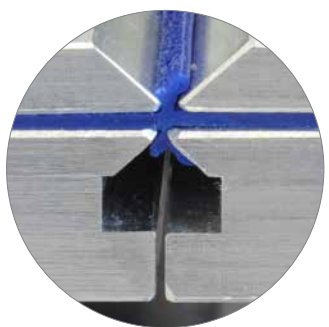
- 1 pc. HS 400-Set (consisting of HS-BOX, HS400, FT400, Connecting cable HS400/HS-BOX, EMO1 bead remover with blades, Insert bar AL 70°/90°, Angle plate 70°/90° and Transport case 400)
- 1 pc. HS 800-Set (consisting of HS-BOX, HS800, FT800, Connecting cable HS800/HS-BOX, EMO1 bead remover with blades, Insert bar AL 70°/90°, Angle plate 70°/90° and Transport case 800)



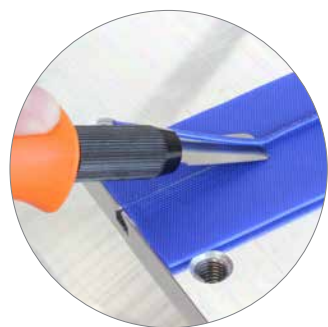
Robust and easy to use control unit for temperature control



Insert bar for repeatable welds



Clamping bars with chamfer for optimum shaping of the welding bead



Easy removal of the welding bead with the supplied tool

Order informations, technical data, Individual components:

Description	Order No.
HS400 Welding Set in case 35,0 kg, approx. 50 x 95 x 30 cm (WxLxH)	FBWHS400US
HS800 Welding Set in case 48,0 kg, approx. 50 x 135 x 30 cm (WxLxH)	FBWHS800US
Individual components:	
HS BOX (Control unit for HS400/800) 1,2 kg, approx. 18 x 20 x 15 cm (WxLxH) Power: max. 3,2kW / 230V AC	FBWHSB01
HS400 (Heating paddle 400mm) 1,2 kg, approx. 8 x 60 x 17 cm (WxLxH) Power: 2,3 kW / 230V AC	FBWHS400S01
HS800 (Heating paddle 800mm) 1,7 kg, approx. 8 x 100 x 17 cm (WxLxH) Power: 3,2 kW / 230V AC	FBWHS800S01
HS400S (Heating paddle 400mm) 1,2 kg, approx. 8 x 60 x 17 cm (WxLxH) Power: 2,3 kW / 230V AC	FBWHS400S02
HS800S (Heating paddle 800mm) 1,7 kg, approx. 8 x 100 x 17 cm (WxLxH) Power: 3,2 kW / 230V AC	FBWHS800S02
FT400 (Joining table for HS400) 12,5 kg, approx. 28 x 55 x 20 cm (WxLxH)	FBWHS400FT01
FT800 (Joining table for HS800) 20,0 kg, approx. 28 x 95 x 20 cm (WxLxH)	FBWHS800FT01
FT800 (Joining table for HS800, Angle 70°) 20,0 kg, approx. 28 x 100 x 17,5 cm (WxLxH)	FBWHS800FTW1

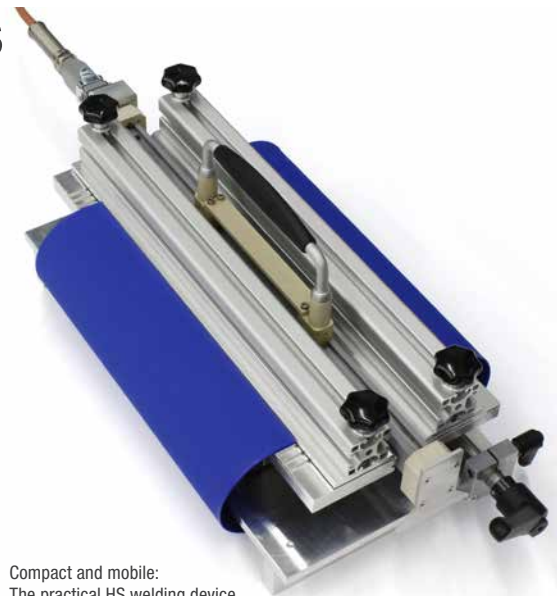
Information & accessories for HS400 & 800

Specially designed adapter plates ensure precise connections in complex belt structures.

Elastic monolithic PU conveyor belts from BEHAbelt offer new possibilities for joining belt ends thanks to their solid PU belt construction. Thanks to the belt design without reinforcement, finger welding is no longer necessary, as the monolithic belt is a homogeneous belt design – even in the weld seam.

The HS welding device from BEHAbelt is a handy and reliable tool for butt welding monolithic belts. The belts can be joined using 90° or 70° butt splices as required. Depending on requirements, two versions are available with the joining table and heating sword for maximum belt widths of up to 400 and 800mm.

The simple operation in combination with the intuitive production aids enables repeatable and high-quality joining of the belts. Optional adapter plates ensure precise positioning and clamping of the belt ends to be welded (e.g. Spike or SuperDrive™) for belts with more complex belt structures.



Compact and mobile:
The practical HS welding device for conveyor belts



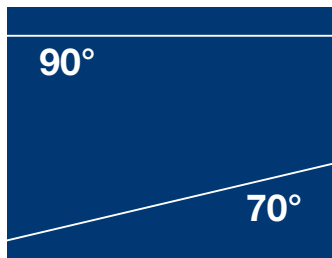
Angle for straight (90°) and bias (70°) cutting of the belt directly in the welding unit (included in delivery).



Precise and aligned insertion of the belt ends.



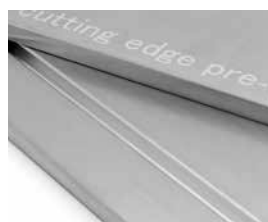
Optional 70° joining table for FT800/70° bias butt welds with HS800



Straight weld with 90° and angled weld with 70° (e.g. for check weighers)

Adapter plates for HS400 & 800

Spike (HS400)	FBWHS4APSP
Spike (HS800)	FBWHS8APSP
AT5 (HS400)	FBWHS4APT5
AT5 (HS800)	FBWHS8APT5
Cleandrive 2", PositiveDrive PD2 (HS800)	FBWHS8APCD
SuperDrive™, CenterDrive CD40 (HS800)	FBWHS8APSD
Thermodrive 2" (HS800)	FBWHS8APTD



Optional adapter plates are available for complex strip structures to ensure optimum alignment and clamping of the belts to be welded in the joining table (not included in the standard delivery programme).

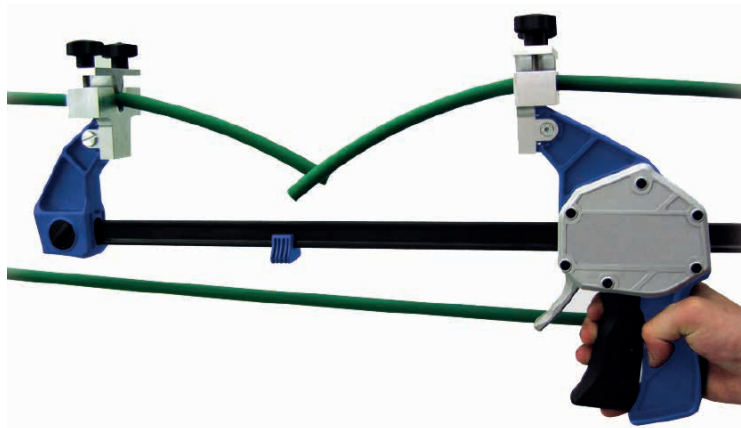
Locking pins ensure that the adapter plates are positioned correctly on the joining table.

RSH

Belt tensioning aid with attachment for pre-tensioning round and V-belts

Product characteristics

- The RSH belt tensioning aid simplifies and supports the insertion and welding of conveyor and drive belts directly in the system.
- Lightweight and compact design.
- Multifunctional prism clamping attachment enables round and V-belts to be clamped.



Current versions of the RSH

- Version RSH01 450 mm (18") clamping range, suitable for belt lengths up to approx. 3 m
- Version RSH02 900 mm (36") clamping range, suitable for belt lengths up to approx. 9 m

Order information:

Description	Order No.
RSH01 (450mm)	FBWRSH01
RSH02 (900mm)	FBWRSH02

Suitable for the following profiles

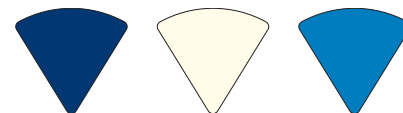
	PU75A	PU80A	PU85A	PU90A	TPE40D	TPE55D
	maximum pretension					
	8%	8%	8%	6%	4%	4%
Round belts Ø 6 - 10 mm	✓	✓	✓	✓	✓	✓
Round belts Ø 10 - 15 mm	✓	✓	✓	✗	✗	✗
V-belts 10 x 6 u. 13 x 8 mm	✓	✓	✓	✓	✓	✓
V-belts 17 x 11 mm	✓	✓	✓	✗	✗	✗

PU/TPE electrodes

For welding flat belts, containers, funnels, and much more.

Product characteristics

- Welding rods made of PU or TPE (6 x 6 mm, size 7) for belt thicknesses of 2...4 mm for welding with a hot air gun.



Order informationen:

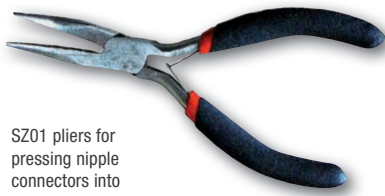
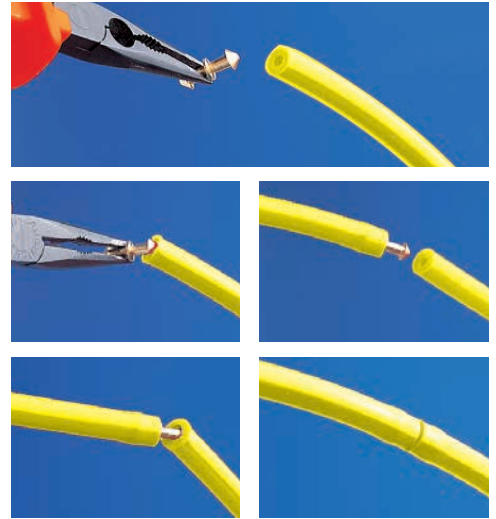
Description	Order No.
PU95A Welding electrode 6 x 6 mm, Size 7 ultramarine blue	FBSEM6X6L
beige	FBSEM6X6B
sky blue	FBSEM6X6LA
TPE55D Welding electrode 6 x 6 mm, Size 7 ultramarine blue	FBSES6X6L

Fitting connectors for hollow round belts

Fitting connectors for quick repairs

Product characteristics

- Hollow round belts should be welded just like solid belts.
- In the case of a breakdown, fitting connectors can be used for a quick repair, until the belt can be welded once again. Another advantage is the flexibility of the belt for small pulley diameters.
- The hollow round belts can be connected via metal connectors, as shown in the picture.
- For the insertion of the metal nipples it is recommended to use a pliers:
- **ATTENTION:** Be sure to wear gloves to press fit the metal fitting connector. Risk of injury!



SZ01 pliers for pressing nipple connectors into hollow round belts.



Brass connectors

Order information:

Description	Order No.
Pliers SZ01	FBWSZ01
Connector for hollow round belts (Outer diameter)	
4,8 mm / 3/16"	FBN048
6,3 mm / 1/4"	FBN063
8,0 mm / 5/16"	FBN080N
9,5 mm / 3/8"	FBN095
12,5 mm / 1/2"	FBN125-150
15,0 mm / 19/32"	FBN125-150

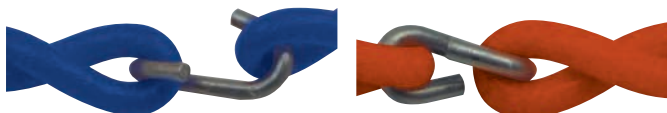
Twisted PU round belts

No costly and time-consuming dismantling of rollers or shafts necessary when changing belts (short downtimes).

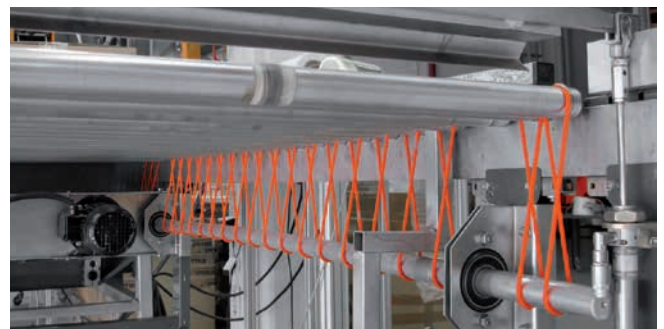
Product characteristics

- Twisted PU round belts, also called "quick connect belts", are the perfect solution for roller conveyor systems where more than one belt is sitting on a shaft (called vertical drive).
- Twisted belts are mounted with the hook open, which then is being closed with pliers once the belt is sitting in the right place.

Other material combinations on request.



Construction: 2 x Ø 3 mm (Ø 5 mm)



Fabrication at BEHAbelt

Automated welding technology for reproducible quality and sophisticated special solutions.

In our in-house fabrication facility, we manufacture belt profiles and belts precisely according to your specifications. The precuts are made to length with millimeter precision, and the ends are then professionally and permanently welded.

This service is particularly useful when the quantities to be processed make manual welding uneconomical, internal capacities are lacking, or no welding technology is available in-house.

State-of-the-art welding machines enable a high number of welds with consistently high quality and reproducibility. In addition, we also take on demanding tasks such as the welding of special profiles or complex overlap splices, which require special experience and precision.

This gives you a product that is ready for installation – reliable, efficient, and in proven BEHAbelt quality.



Services

Belt profiles

- Butt welding
- Butt welding with coating
- Butt welding with reinforcement
- Overlap welding with reinforcement

Flat belts

- Cut to width
- Butt welding (90° and 70°)



Welding equipment rental at BEHAbelt

Flexible welding – exactly when you need it.

BEHAbelt offers professional welding equipment for hire for temporary requirements or project-related applications. This allows you to remain flexible without having to invest in your own technology. Our equipment is tried and tested, reliable, and ready for immediate use – ideal for order peaks, maintenance work, or short-term requirements.

Available rental equipment

- RS02 (friction welding machine)
- HP01 (hot press)
- EErgo (hot paddle)
- HS400 (welding unit)



HP01, Hot press



RS02, Friction welding machine



HS400 - Welding unit for flat belts



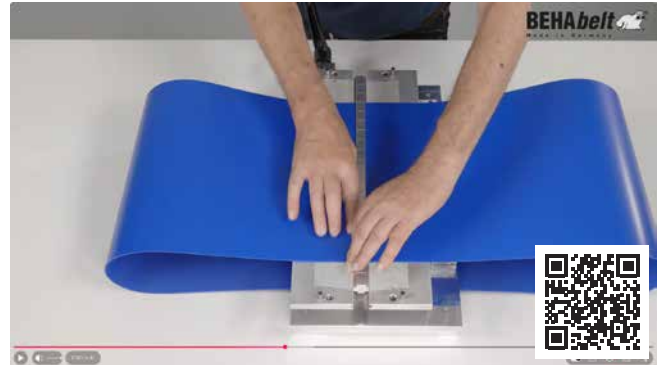
EErgo, Hot paddle

Tutorial videos on welding technology

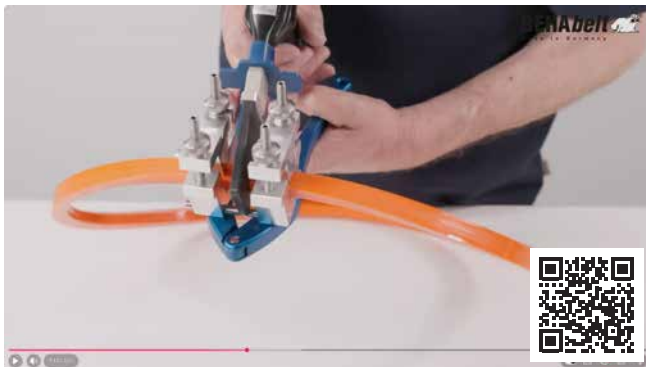
On our YouTube channel, we offer videos that explain how to use BEHAbelt welding tools step by step. If you would find a video on a specific topic helpful or have questions about the existing ones, our technical team would be happy to hear from you (+49 7686 9070 or info@behabelt.com).



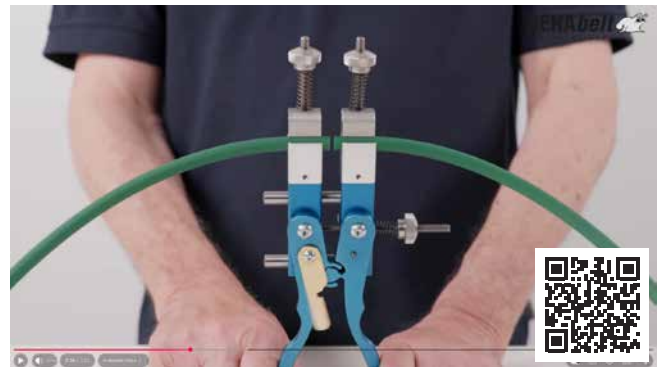
RS02: The unique RS02 friction welding machine is the professional tool for maintenance operations and also the fastest and most reliable method for welding PU belt profiles.



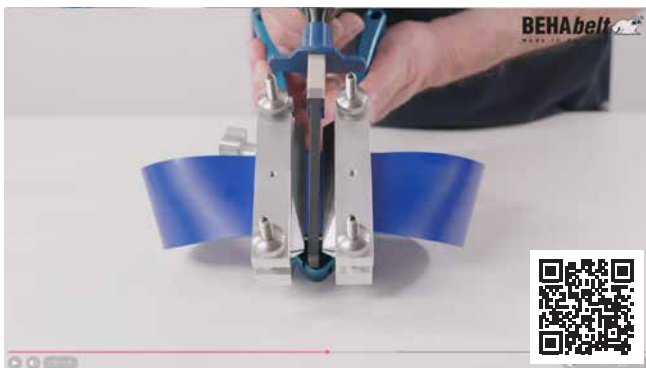
HS400 & 800: Specially developed welding technology consisting of a joining table and heating sword for butt splice welding of monolithic belts made of PU or TPE.



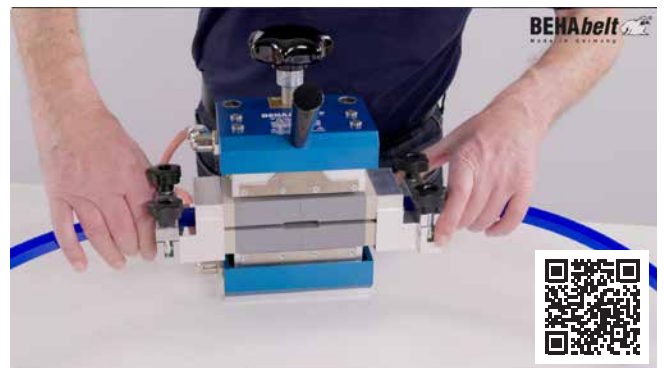
FZ02/3 & EErgo 60: This video shows butt welding of larger belt profiles using the FZ02/3 guide clamp and the EErgo 60 hot paddle.



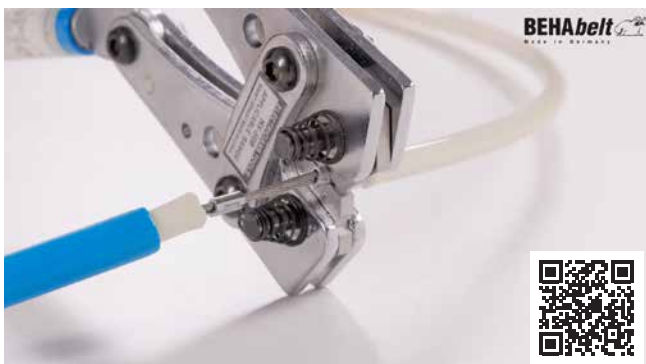
FZ01 Vario & EErgo 60: Guide clamp with automatic contact pressure for butt welding with the EErgo 60 hot paddle.



FZ02/3F & EErgo 90: Guide clamp for butt welding of belt strips up to 80 mm wide with the EErgo 90 hot paddle.



HP01: Hot press with fully automated vulcanization and cooling process for producing repeatable overlap splices.

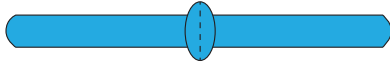


HP01 & CRIMP-Set: For connecting steel-reinforced belt profiles using crimping in the HP01 hot press.

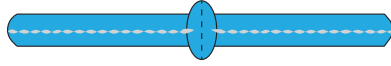
Overview of connection types

BELT PROFILES

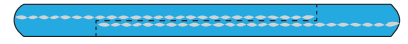
Regardless of whether you use unreinforced belts or reinforced belts, we distinguish between the following connection types: butt welding and overlap splice.



Butt splice without reinforcement
(Standard)



Butt welding with reinforcement
Butt welding to reduce elongation without changing the belt tensile force.

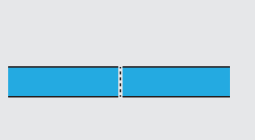
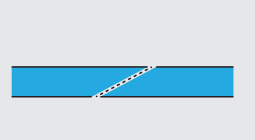

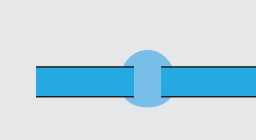


Overlap welding with reinforcement
Overlap welding to reduce elongation and increase the belt tensile force.



ELASTIC MONOLITHIC BELTS

Elastic monolithic PU conveyor belts from BEHAbelt offer new possibilities for endless joining due to the full PU belt construction. Due to the belt design without traction-layer, a connection by finger welding is no longer necessary, as the monolithic belt is a homogeneous belt design in itself - even in the joining area. A preferably homogeneous design of the joint is a quality criterion both functionally and with regard to the elastic elongation behaviour of the monolithic strip. In principle, this potentially "inhomogeneous" area should be as narrow as possible, since the relatively large pretensioning force applied to monolithic belts of 0.5...5% inhomogeneity in the tape is very quickly visible in the tensioned state.

					
		Butt welding	Overlap welding	Finger-joint	Electrode welding
PREPARATION	+	Single 90° cut or optional 70° for demanding pulley design.	Single 90° cut.		Single 90° cut.
	-		Preparation of the lap joint. To maintain the surface structure of the conveyor belt, it is necessary to insert embossing mats.	Preparation finger. To maintain the surface structure of the conveyor belt, it is necessary to insert embossing mats.	Belt edge should be chamfered slightly.
FINISHING	+		Rework normally not necessary.	Rework normally not necessary.	
	-	Welding seam must be removed with a knife.			Very time consuming to remove welding seam.
EQUIPMENT	+	Relatively easy and mobile welding by means of a heating paddle and joining table.			Very easy, only hot air gun and electrode.
	-		Can be performed with standard hot press. However, it is best to use a special tool with a narrow heating area.	Finger punching and heating press necessary.	
CHARACTERISTICS IN THE WELDING AREA					
Homogeneity		⊕⊕	⊕⊕	⊕	⊖
Elasticity of belt		⊕⊕	⊕⊕	⊖	⊕
Maintain the belt structure		⊕⊕	⊕	⊕	⊕
CONCLUSION		recommended BEHAbelt standard	alternatively recommended belt welding	traditional belt welding	manual welding. Especially in container and funnel construction.



Butt welding with paddle welding tool



Overlap welding with hot press



Finger joint with a hot press



Welding with electrodes

Frequently asked questions about welding

Below, we discuss important technical topics relating to the welding of belt profiles and conveyor belts. If you feel that a topic is missing or have questions about a particular area, our technical team would be delighted to hear from you (+49 7686 9070 or info@behabelt.com).

What are the correct temperatures for welding PU and TPE?

To ensure that the welded connection on the belt is carried out reliably, we recommend the following temperatures:

- PU (Polyurethane) 285°C (approx. 275...295°C) or 545°F (approx. 527...563°F)
- TPE (Polyester) 235°C (approx. 225...250°C) or 455°F (approx. 437...482°F).

In general, it is recommended that the belt to be welded is at least at room temperature. Excessively high temperatures “burn” the welding material, while excessively low temperatures do not transfer enough bonding energy to the melt. This results in a “cold” weld seam and thus reduced strength at the joint.

Is the weld seam as strong as the rest of the belt?

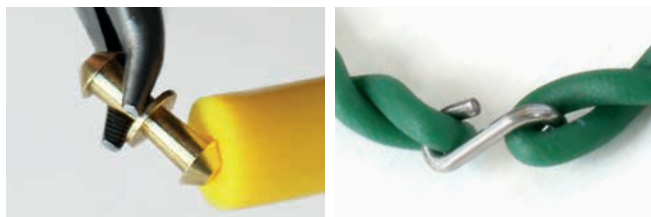
If the welding is carried out correctly (temperature, contact pressure, holding time, cooling time), the seam is just as strong as the rest of the belt. If carried out professionally, the belt tears immediately after the weld seam because the elasticity in the weld seam is lower than in the rest of the belt. This means that under heavy loads, necking or elongation occurs at this point, which can lead to breakage.

Are there alternative connection options besides welding belt profiles?

Mechanical connections are an alternative to welding. There are two cases in which the use of mechanical connection options can be advantageous:

On the one hand, quick bridging of machine downtimes, even by untrained personnel; on the other hand, difficult access to the welding point in the system.

BEHAbelt offers twisted round belts or hook belts for this purpose. These are connected with a metal hook.



The other alternative is hollow round belts, which are connected by pressing a connector into the hole.

Mechanical connections lead to greater material fatigue than welded belts and thus to a shorter service life.

How do you weld a belt in a small installation space?

For this purpose, we recommend using our guide clamps with a hot paddle. Alternatively, mechanical connection options can also be used.

For easier handling, we recommend removing the belt from the pulley or drum for welding and welding it only via the axle loop with less tension.

Does the reinforcement have to be “drilled out” before a butt splice is performed?

Since the reinforcements (aramid and polyester) themselves cannot be welded, the reinforcement in the belt must always be subjected to a drill-off. If this is not done, the ends of the reinforcements may be compressed in the welding area, which minimizes the effective connection area (strength) and also blocks the necessary compression in the weld seam.

Rule of thumb: The drilling depth is equal to the height of the belt!

When should reinforced belt profiles be used? In which cases is butt welding or overlap welding necessary?

Reinforced belts are generally used to reduce working elongation on the one hand and to increase the maximum permissible conveyor load on the other.

The selected joining technique also influences the characteristics of both parameters.

While a butt splice does not increase the maximum conveyor weight, but primarily influences the elastic behavior (working elongation) of the belt, an overlap splice addresses both aspects: it increases the maximum possible conveyor weight and reduces the working elongation of the belt profile.

In summary, the parameters of belt length and conveyor weight are decisive in the selection of a reinforced belt profile and the appropriate connection type.

The following rule of thumb can help you select and decide on a tension member reinforced belt.

Parameter: Belt length

Depending on the belt length L (in mm) used, the following applies:

$L < \text{belt height (mm)} \times 1.000$

As a rule, a reinforced belt is not required.

$L \geq \text{belt height (mm)} \times 1.000$

The use of a belt is recommended.

$L \geq 2 \times [\text{belt height (mm)} \times 1.000]$

The use of a reinforced belt is required.

Parameter: Conveyor weight

BEHAbelt offers a convenient design aid in its product catalog for determining the maximum permissible conveyor weight and the required pretension for all reinforced BEHAbelt belts.

WELDING TECHNOLOGY FOR MANDRELS IN HOSE MANUFACTURING



BEHA mandrel welding machines are specially designed for joining hose mandrels made of PP, nylon (PA), TPEE, and TPX. They are characterized by fast and error-free operation as well as simple and ergonomic handling.

More information: www.mandrel-welder.com

RSX01

The RSX01 mandrel welder can be used to weld hose mandrels quickly and precisely. The welding parameters are optimally matched to common materials, ensuring high repeatability and ease of use. Since the connection is made using frictional heat, long heating times are not necessary.



Product characteristics

- Very fast connection of hose mandrel ends by friction welding
- No risk of burns or fire
- Process reliability thanks to optimized welding parameters and interchangeable clamping jaws
- Can be used as a hand-held or stationary solution
- Perfect weld seams

Scope of delivery:

1 pc. RSX01 friction welding machine, 1 pc. mounting adapter, 1 pc. tool for loosening the clamping jaws, 1 pc. hexagon socket wrench, 1 pc. storage box for clamping jaws, 1 set of clamping jaw adapters

Order information:

Description	Order No.
RSX01 MANDRELwelder, 115V	FBWRSX12115V

EErgo Mandrel

Practical and handy hot paddle with predefined temperatures for hose mandrels made of PP, nylon, TPEE, and TPX. The heating time is only 5 minutes and remains constant even at widely varying ambient temperatures.



Product characteristics

- Robust glass fiber reinforced housing
- Easy to use: 1 button for PP, 1 button for nylon, TPEE, TPX
- Alignment of hose mandrel ends with a guide clamp
- Ergonomic, user-friendly design

Scope of delivery:

1 pc. EErgo Mandrel, 1 pc. Torx wrench, 1 pc. Guide clamp FZ01 Vario, 1 pc. Guide clamp FZ02/3, 1 pc. Carrying case

Order information:

Description	Order No.
EErgo Mandrel Hot paddle, 115V	FBWEE037

Optional accessories:

Ratchet shears

For cutting very hard plastics, e.g., PP, nylon (PA), TPX, TPEE



Order information:

Description	Order No.
Mandrel Shears Ridgid 01	FBWRM01

BEHAbelt offers much more

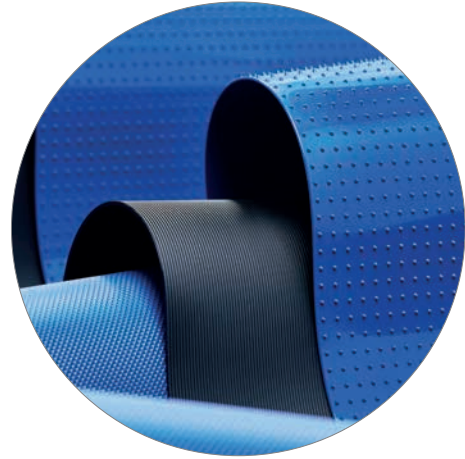
True to the motto “smart conveying,” BEHAbelt has been developing and supplying innovative solutions in conveyor and drive technology since 1974. Below you will find an overview of the other product groups in the BEHAbelt portfolio. We would be happy to send you further details and information, or you can visit our website at www.behabelt.com. Thank you for your interest.

WELDABLE BELT PROFILES MADE OF PU AND TPE



BEHAbelt offers a wide range of PU and TPE belt profiles. Our products are available in various Shore hardness grades (60°-95° Shore A, 40°-63° Shore D), colors, surfaces, and properties to ensure optimal drive and transport characteristics as well as a long service life.

ELASTIC, MONOLITHIC CONVEYOR BELTS



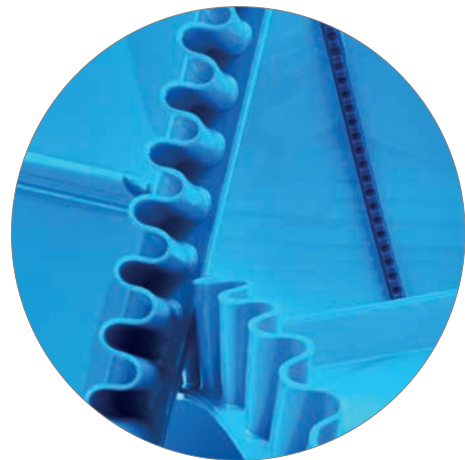
BEHAbelt conveyor belts are manufactured exclusively as monolithic solid PU belts. The deliberate decision not to integrate a fabric insert offers enormous advantages in terms of hygiene and processing. Our 2-component technology allows for an almost unlimited variety of combinations in terms of surface structures, material properties, and colors.

COATING MATERIALS FOR TIMING BELTS AND V-BELTS



High-quality coating belts made of solid PU with excellent weldability for the individual coating of toothed and V-belts or other products. The coating materials ensure better grip, enable accumulation of the conveyed material, or better release of the conveyed material with low wear.

WELD-ON PROFILES FOR CONVEYOR BELTS



BEHAbelt offers the following PU weld-on profiles for the finishing of conveyor belts: corrugated edges, cleats, Beld edges, and V-guides. The excellent weldability of the materials ensures robust and durable connections. For some weld-on profiles, a raw material quality is available that allows PU profiles to be welded onto PVC.

Authorized Distributor



Belting Solved **24/7** On-Site Service 877 MIR-BELT



BEHAbelt USA

835 Bonnie Lane, Elk Grove Village, IL 60007 / USA

Tel.: +1 630 521 9835 · E-Mail: usa@behabelt.com · Internet: www.behabelt.com