

Butt Welding Kit Usage Instructions

Warning: This equipment contains sharp and hot components and should be used with caution. BTL accept no responsibility for damage or injury caused by the misuse of this equipment.

The BTL Butt Welding Kit provides a simple and easy means of joining both non-reinforced and reinforced PU and Polyester belts. Used correctly the kit will provide a join which gives 90% of a non-reinforced belt's tensile strength. Follow the fitting instructions carefully, we recommend getting familiar with the kit and procedures by practicing on a short piece of belt.

Before Starting

1) Check all the components are included in the kit.

This kit includes:- (see fig 1)

- A) Hand Clamping Tool
- B) Hot Knife
- C) Belt Cutters
- D) Flash Cutters
- E) Drill Bits

2) Ensure that the area you have allocated to join the belts is well ventilated, clean and dry.

3) Ensure that the belt you are joining is suitable to be joined by this kit. (see table opposite)



fig 1

THE BELTS LISTED BELOW CAN BE JOINED USING THIS BUTT WELDING KIT

Round	2 to 20mm
Vee Section	5x3mm to C section
All other BTL standard profiles	

Using the Butt Welding Kit

- 1) Examine the Hot Knife for scratches on the surface of the coated blade. A scratched or damaged surface can adversely affect welding results. If damaged the blade may need to be replaced. Contact BTL for more details.
- 2) Plug the Hot Knife into a 240v (or 110/120v as appropriate) socket and preheat for 10 minutes. Once hot, use a clean, dry cotton cloth to gently remove any urethane residue from previous welding from the Teflon surface. Do not use a hard object to scrape the surface as this can damage the Teflon coating.

Warning: the surface temperature is 220°C please alert others in the workplace and do not leave unguarded. BTL accept no responsibility for injury or damage caused by the misuse of this equipment.

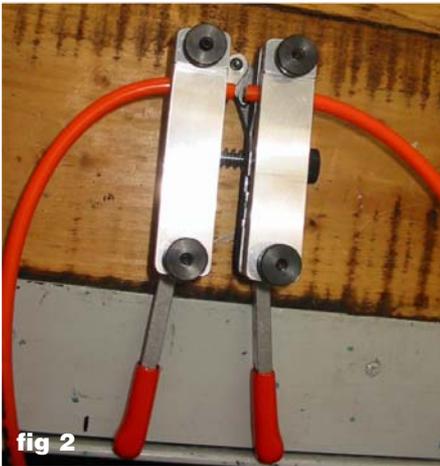
- 3) Using the belt cutters provided cut the belt to the required length (see belt tensioning details in the BTL product brochure), ensure each end of the belt is cut perfectly square.
- 3b) Refers to Reinforced Belts Only - Hold the belt in the hand clamp or vice and using the drill bits included drill out the tension cord at both ends. (see table below for details)

BELT PROFILE	DRILL BIT
Up to 8mm Round Z & A section Vee	2mm
Round 8 to 12mm B section Vee	3.5mm
Round 15 to 20mm C section Vee	5mm

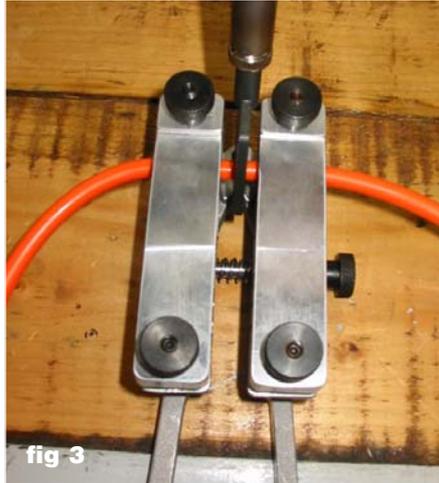
Butt Welding Kit

4) Using the Hand Clamping Tool set the jaw gap to approximately 15mm using the side thumbnut to make adjustments, starting on one side, loosen the clamp nuts and place the ends of the belt in the correct clamping grooves. See point 5 for details. The diagrams opposite illustrate the correct positions to insert the belts. For round or ridge top profiles remove the bottom plate. Round belts should be fitted in the V shaped groove (2-3mm diameter in the smallest groove, 4-8mm in the medium, 10-15mm in the large V groove)

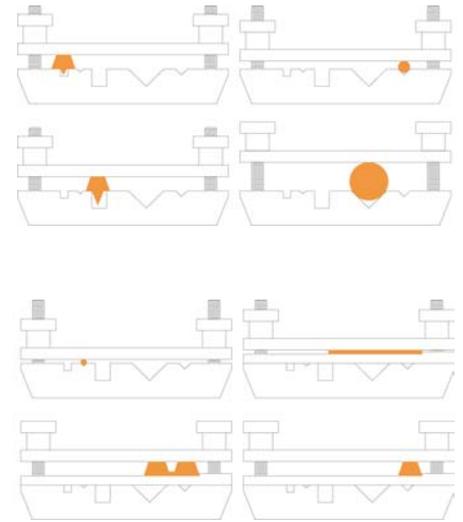
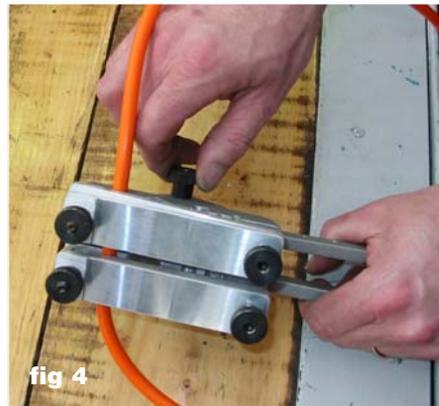
5) Position one end of the belt in the end extending approx 5mm into the gap and tighten the top clamp nuts. Repeat the process with the other end of the belt, this should result in a 5mm gap between the ends. (see fig 2)



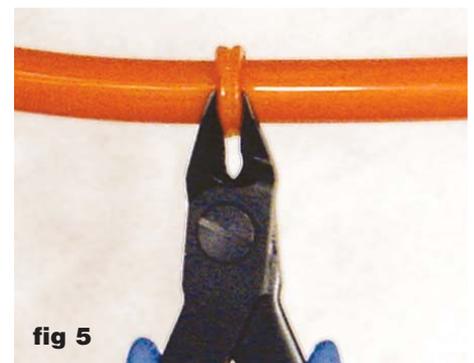
6) Insert the Hot Knife blade between the belt ends (see fig 3) and ease the handles together. Continue to close the handles until approx a 3mm high melted bead appears on both belt ends then hold in place. Leave the Hot Knife in place for the required "dwell time" (see table below for guidance) to ensure material reaches the required temperature.



7) Tighten the thumb nut on the right to clamp the belt tightly and allow the welded joint to cure. In general belt sections under 3mm require approximately 1 minute cooling off before being removed from the clamp, belts 3mm should be left clamped for about 3 minutes. After the required cooling period loosen the clamp nuts and remove the belt from the clamp. (see fig 4)



8) Use the Flash Cutters included to trim off the excess material around the join. (see fig 5)



9) Once removing from the Clamp it is advisable to allow the belt to cure for a minimum of 30 minutes before installing or tensioning.

BELT SIZE	ESTIMATED "DWELL" TIME
2mm - 6mm	10 seconds
7mm - 9mm, Z section	10 - 20 seconds
10mm, A section (except high ridge)	21 - 30 seconds
12mm - 15mm, twin, a high ridge, B section	31 - 50 seconds
15mm +, C & D section	50 seconds

If you require any further information please contact us:



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