Industrial Fabric Welding
For the bonding of thermoplastic textiles, the Triad Wedge Welding System is ideal for your in-house fabrication needs to produce tents, tarps, awnings, flags, banners, liners, covers, curtains, bags, tubes, etc. The Triad can weld PVC, PE, PP, Urethane and many other weldable, flexible membranes. It can also weld supported and non-supported material in thicknesses of 5 to 100 oz. and is designed to be portable, versatile and user friendly.

**Smokeless and Noiseless Operation**
Because it’s a wedge, the Triad will not produce any hazardous smoke during the welding process, as hot air welders do. The Triad is noiseless, for a more pleasant working environment.

**Increase Productivity**
The Triad is fast! It can weld 12 to 14 oz. material at approximately 20 feet per minute. With thinner materials, the maximum speed of the Triad is approximately 30 feet per minute.

**Reduce Labor Costs**
By utilizing the built-in tracking system and available Track Sections, the Triad can be operated by a single person. Set-up is easy on the floor, or a table surface, and the guides provide accurate results.

Create Additional Welding Styles with your imagination!

The Standard Triad can Achieve the Following Welds: (specify wedge size)
- Overlap Weld - 1/2” to 2” weld width
- Hem Weld - Adjustable pocket size
- Fin Weld - 1/2” to 2” weld width
- Tube Weld - 1-1/2” diameter and up
- Sleeve Weld - 1” diameter and up
- Insert Cable Weld - Insert cable into hem while welding, 7/8” max.
- Tape Weld - Up to 2” weld width
- Channel Weld - Using split wedge
TRIAD WEDGE WELDING SYSTEM

How does it work?
The welding of various thermoplastics occurs by a combination of wedge temperature, material speed passing over the wedge, and pressure of the pinch rollers. The material is placed between the pinch rollers and the hot wedge is inserted. Contact is made between the top and bottom of the material and a melting of the coating occurs with a certain speed of the material crossing the hot wedge surface. The pinch rollers then apply pressure to the melted coating to create the lasting bond.

The Triad can be used as a stationary unit for short weld lengths, or as a self-propelled unit for long run welding where the Triad automatically begins moving when the wedge is inserted.

Patented Self-Centering Wedge
The wedge will self-center with change in material thickness automatically, or it can be manually adjusted for welding two materials of different thicknesses.

Patented Suspended Wedge
This allows the operator to pass material through the Triad in many different ways to achieve various weld styles.

Exclusive Wedge Housing
A unique feature that allows the hot wedge to be stored out of the way, to help minimize heat distortion of product and provides operator protection while setting up material.

Standard Guides
The standard Triad includes the three guides to perform the basic weld styles: Lower Lap Guide, Hem Guide, and Fin Guide. These guides work alone or in conjunction to accomplish the basic weld styles and more.
HEM CORD ATTACHMENT

The Hem Cord Attachment is used to produce a 1” weld width with a rigid or flexible cord or rope inserted within the hem. The material can be welded tight around the rope or cord. This weld finish is best used in extruded aluminum channels for construction of air structures, awnings, tents, truck covers, side curtains, screens, blinds, and digital print.

In the welding area, the material passes through the Hem Cord Outer Guide to position both the cord and material and complete the hem cord weld. A unique front guide is used to position the cord and pre-fold the material as it enters into the Triad.

The Hem Cord Attachment should be ordered according to size of cord or rope to be used.

- #33-104.18: Hem Cord Attachment, 120V, 3/32” - 1/4” Cord (3mm-6mm)
- #33-105.18: Hem Cord Attachment, 240V, 3/32” - 1/4” Cord (3mm-6mm)
- #33-104.12: Hem Cord Attachment, 120V, 5/16” - 1/2” Cord (7mm-13mm)
- #33-105.12: Hem Cord Attachment, 240V, 3/32” - 1/2” Cord (7mm-13mm)
- #33-104.58: Hem Cord Attachment, 120V, 9/16” - 5/8” Cord (14mm-16mm)
- #33-105.58: Hem Cord Attachment, 240V, 9/16” - 5/8” Cord (14mm-16mm)
- #33-107.1.5: Hem Cord Attachment, 120V/240V, 1-1/2” Wedge (38mm)
- #33-109.2.0: Hem Cord Attachment 120V/240V, 2” Wedge (50mm)

Axle Change Necessary

The Hem Cord Attachment includes:
- 1” Hem Wedge w/Heaters, Hem Wedge Housing, Hem Top Guide, Hem Cord Front Guide (specify size) & Hem Cord Outer (specify size). Shown in photo with the 2 different front guides and all 3 outer guide sizes.

FLAT HEM ATTACHMENT

The Flat Hem Attachment will produce a 1.2” (31mm) finished weld width completely sealed to the folded edge of material. This attachment is ideal for fabricating banners, flags, awnings, tarps and covers, where a clean flat rigid edge is needed for accepting grommets or making a clean, finished edge.

At the welding area, the Flat Hem Outer Guide applies pressure to the fold of material against the side of the wedge to melt the thermoplastic. The larger Pressure Rollers complete the weld.

Once you own a Flat Hem or Hem Cord Attachment, you can accomplish the other weld style by simply adding additional guides, and/or rollers. Similar parts interchange, no need to purchase another complete system.

A unique front guide is used to pre-fold and position the material for initial set up as it enters into the Triad. In addition, see the Vinyl Flat Hem/Hem Cord Kit to have both style welds in one.

- #33-104.1: Flat Hem Attachment, 120V, 1” Wedge (25mm)
- #33-104.2: Flat Hem Attachment, 240V, 1” Wedge (25mm)
- #33-108.1.5: Flat Hem Attachment, 120V/240V, 1.2” Wedge (30.5mm) for 1.5” (38mm) finish
- #33-108.1.8: Flat Hem Attachment, 120V/240V, 1.5” Wedge (38mm) for 1.8” (48mm) finish

The Flat Hem Attachment includes:
- 1” Hem Wedge w/Heaters, Hem Wedge Housing, Hem Top Guide, Hem Cord Front Guide, Flat Hem Outer Guide & 2” Silicon Pressure Rollers w/hardware (2 qty)
THERMAL TAPE ATTACHMENT

The Thermal Tape Attachment provides for the proper positioning of our Thermal Bonding Tape to weld acrylic coated fabrics and other materials. This tested, proven method of welding acrylic coated fabric will produce overlap, hem cord, flat hem, and pocket welds with your existing Triad Wedge Welder.

The Thermal Tape Attachment includes:
- Thermal Tape Hanger Assembly
- Thermal Tape Flat Hem Outer Guide
- Thermal Tape Hem Cord Outer Guide
- Thermal Tape Wedge Housing + Top Guide
- Thermal Tape Front Guide + Hem Cord Front Guide
- 1.5” + 2” Silicone Pressure Rollers w/Hardware (2 qty)
- 1” Hem Wedge w/Heaters
- Uniseam FR Thermal Bonding Tape (1 roll)

#33-090: Thermal Tape Attachment 120V, 1” Wedge (25mm)
#33-090.2: Thermal Tape Attachment 240V, 1” Wedge (25mm)

THERMAL BONDING TAPE

Our Thermal Bonding Tape ensures a quality seal of acrylic coated fabric for a non-perforated, watertight bond. Provides an aesthetic, flat seam; perfect for retractable systems. Seam strength tested to be stronger than the material in the pull tension direction. We offer the exclusive Uniseam standard tape, great for woven textured non-coated acrylic fabric, as well as the Uniseam FR tape designed with a tacky adhesive to bond best to a variety of fabrics.

In addition, we offer the new 3M™ Stitchless Awning Bonding Film; this tape provides excellent bonding to the greatest range of fabric types including the new Firesist™ product from Sunbrella®. All Sinclair tapes have been endorsed by Glen Raven, Inc.

#34-000: 3M™ Stitchless Awning Bonding Film, 7/8” wide, Translucent/Tan, 100 yard rolls
#34-200: Uniseam FR Thermal Bonding Tape, 7/8” wide, White, 100 yard rolls
#34-250: Uniseam FR Thermal Bonding Tape, 7/8” wide, Black, 100 yard rolls
#34-300: Uniseam FR Thermal Bonding Tape, 7/16” wide, White, 100 yard rolls
#34-350: Uniseam FR Thermal Bonding Tape, 7/16” wide, Black, 100 yard rolls
THIN MATERIAL ATTACHMENT

A unique attachment for overlap welding thinner, non-supported material from 5-10 mil thicknesses. Pre-weld rollers and guides align material to help eliminate drifting. With a weld width of 1” or less, the Thin Material Attachment is used with the hem wedge and housing.

#33-106: 120V Thin Material Attachment
#33-106.2: 240V Thin Material Attachment

TUBE GUIDE ATTACHMENT

#33-450: The Tube Guide Attachment will provide a guide system to produce a specific size tube, on a continuous basis. Ideal for fabricating bladder bags, flotation tubes, ventilation tubes, filtration socks, sandbags, etc. The Tube Guide is adjustable from approximately 1.3” (31mm) to 11.5” (288mm) diameter and fabricates tubes in an automatic or stationary mode. The Tube Guide will retrofit to existing Triads and can produce tubes with the standard wedge and housing or the hem wedge and housing.

Attach long rods and guide (included) for tubes of 4.5” (112mm) to 11.5” (288mm) diameter, approximate. The Tube Guide Attachment comes complete with hardware (shown left). The attachment does not include a wedge or wedge housing. Use existing wedge and wedge housing on your Triad.

CARRIAGE FOR CURVE WELDING

#33-097: For both the Triad and Spec Welders, the Carriage for Curve Welding Attachment provides an easy means for turning to the right or left guiding the welder along a curved edge.

ATTACHMENT KITS

Vinyl Flat Hem/Hem Cord Kit
#33-094: 120V, #33-094.2: 240V

Ultimate Welding Attachment
#33-092: 120V, #33-092.2: 240V
Designed around the needs of the digital graphics printer, the Triad DGP provides many different finishing styles including overlap, flat hem, hem cord, pockets, etc. Our Triad DGP can be set up either as a 1” (25mm) or 1.5” (38mm) seam width. In addition, an option for either seam width is available on our Triad 6” Pole Pocket base for making up to a 6” (152mm), single fold pocket. For those with a current 1” (25mm) Triad DGP, we offer an upgrade kit to 1.5” (38mm).

#33-019: Triad Wedge Welder, 120V, Flat Hem/Hem Cord, 1” DGP
#33-022: Triad Wedge Welder, 120V, Flat Hem/Hem Cord, 1.5” DGP
#33-027HC: Triad Wedge Welder, 120V, 6” Pocket Machine, Flat Hem/Hem Cord, 1” DGP
#33-027HC1: Triad Wedge Welder, 120V, 6” Pocket Machine, Flat Hem/Hem Cord, 1.5” DGP
#33-049: Triad Wedge Welder, 240V, Flat Hem/Hem Cord 25mm DGP
#33-055: Triad Wedge Welder, 240V, Flat Hem/Hem Cord 38mm DGP
#33-027HC2: Triad Wedge Welder, 240V, 6” Pocket Machine, Flat Hem/Hem Cord, 25mm (DGP)
#33-027HC15: Triad Wedge Welder, 240V, 6” Pocket Machine, Flat Hem/Hem Cord, 38mm (DGP)
#33-096: Triad DGP Upgrade Kit to 1.5” (38mm) Kit 120V/240V
SPECIAL BUILT TRIADS

Triad Acrylic Fabric Tape Welder
Designed for the awning maker, this Triad is built to use the Thermal Bonding Tape and provide the weld styles of overlap, hem cord, flat hem, and pocket.
#33-060: Triad Wedge Welder, 120V, w/Thermal Tape Attachment, 1” Wedge (25mm)
#33-060.2: Triad Wedge Welder, 240V, w/Thermal Tape Attachment, 25mm Wedge (1’’)

Triad 6” Pole Pocket Welder
With a wider base, this Triad provides for a 6” (152mm) single fold of material for larger diameter pockets. Built with either a 1” (25mm) or a 1.5” (38mm) standard wedge and housing. All Triad Attachments fit on this unit.
#33-026: Triad Wedge Welder, 120V, 6” Pocket Machine, 1” Wedge (25mm)
#33-027: Triad Wedge Welder, 120V, 6” Pocket Machine, 1.5” Wedge (38mm)
#33-051: Triad Wedge Welder, 240V, 6” Pocket Machine, 25mm (1”)
#33-052: Triad Wedge Welder, 240V, 6” Pocket Machine, 38mm Wedge (1.5”)

Triad 10” Pole Pocket Welder
For even larger pockets, this Triad provides for a 10” (254mm) single fold of material. Built similar to the Triad 6” above and all Triad Attachments fit on this unit.
#33-063: Triad Wedge Welder, 120V, 10” Pocket Machine, 1” Wedge (25mm)
#33-064: Triad Wedge Welder, 120V, 10” Pocket Machine, 1.5” Wedge (38mm)
#33-067: Triad Wedge Welder, 240V, 10” Pocket Machine, 25mm (1”)
#33-068: Triad Wedge Welder, 240V, 10” Pocket Machine, 38mm Wedge (1.5”)

Triad 3” Overlap Welder
To meet your larger weld width specs, this Triad is built with 3” (76mm) wedge and rollers. Smaller wedge/rollers and all attachments fit on this Triad.
#33-025: Triad Wedge Welder, 120V, 3” Wedge (76mm)
#33-050: Triad Wedge Welder, 240V, 76mm Wedge (3”)

Triad Dedicated Hem Welder
Designed with a large opening for the easy insertion of material, this Triad is capable of only the hem style welds. Build with Hem Cord Attachment for 3/32” to ¼” (3-6mm) cord size.
#33-012: Triad Wedge Welder, 120V, Dedicated Hem Cord, 1” Wedge (25mm)
#33-012.2: Triad Wedge Welder, 220V, Dedicated Hem Cord, 1” Wedge (25mm)

TRACK SECTIONS
Prefabricated 5’ (1.5m) track sections are ideal for long runs, material handling and reducing operator error. By using the track, the operator does not have to worry about steering the welder. The Track System can be permanently mounted or left portable for space savings. Track available for standard welders as well as 6” Pole Pocket welders. Includes 20-gauge galvanized steel section, track connector, hardware and magnets.
#33-500: 5’ Track System w/Connector
#33-600: 5’ Track System w/Connector (For 6” Pocket Triad)
The Spec Wedge Welders have been designed as “specific”, single purpose welding machines to accomplish a particular weld style. Individual machines are built to perform an overlap weld, hemming welds (flat hem, hem cord, pockets), welding acrylic coated fabrics, high speed production, or weld thick materials. Excellent visibility of the material, ease of material set up, user friendly controls and adjustments, and lower cost units are all key features of the Spec. As a compliment to the Triad Wedge Welder, a Spec can be dedicated to a specific welding application, reducing the change of attachments, at an affordable price.

The Spec Wedge Welder is noiseless and smokeless while welding. The wedge has a patented self-centering feature for an even weld across the seam width. The new swing-out wedge provides for easy cleaning, inspection, and servicing. A unique material guide system for each individual Spec machine provides fully adjustable controls with no parts to remove or exchange. The Spec Wedge Welder will run within our track sections for a single person, nearly hands-free operation. In addition, a left hand (mirror image) of the Spec Wedge Welder is available for simultaneous welding; an excellent choice for high production finishing of digital graphics, tents, awnings, and covers.
The Spec Overlap Welder is a cost effective solution to your dedicated overlap welding needs. The design provides excellent visibility of the thermoplastic material for set-up and welding. The guide system is fully adjustable both in the front, to position the material entering the machine, as well as three different directions in the welding area. A wide range of wedge sizes are available and, with the swing-out feature, wedges are easy to change for different seam sizes.

The Spec Hemming Welder is designed to complete the three basic hem finish style welds from a single machine. The special guide system can be adjusted to weld the flat hem, hem cord, and various size pocket welds. This welder is perfect for banners, billboards, awnings, covers, tarpaulins, etc. The guide is the complete length of the machine for easy loading and consistent alignment. A mirror image Spec Hemming Welder is available for side by side welding and increased production time.
The Spec Overlap Acrylic Fabric Welder provides for the proper positioning and guiding of the Thermal Bonding Tape for the welding of acrylic coated fabrics. The thinner Spec Hem Wedge is used for a quality melt of the tape. Welding acrylic fabrics produces a flat, waterproof seam with strength, durability and visually appealing results.

#SW70300: 110V Spec Overlap Fabric Welder
#SW72300 220V Spec Overlap Fabric Welder

The Spec Hemming Acrylic Fabric Welder is equipped with a guiding system to turn and feed the Thermal Bonding Tape in position for welding acrylic coated fabrics. The welding style of flat hem, hem cord and pockets can be completed. The welding of acrylic coated fabrics provides a flat, water-proof, and strong finish.

#SW70200: 110V Spec Hemming Acrylic Fabric Welder
#SW72190: 220V Spec Hemming Acrylic Fabric Welder

Fully adjustable keder sizes for single or double flap configuration. Our Spec Hem Welder is the basis for the unit that includes the material unrolling device to produce your finished keder. The aluminum mounting structure can be a stand alone unit or can be mounted on a table. Self-feeding keder machine can produce up to 250 meters per hour.

#SW73000: 110V Spec Keder Production System
#SW73020: 240V Spec Keder Production System
**SPEC HIGH SPEED OVERLAP WELDER**

*Weld up to 70 Feet (21m) per Minute*

With a faster drive motor and a unique pre-heat roller system, the Spec High Speed Welder can increase your production output. As a 240V unit and providing an overlap style weld finish, choose from three different hot wedges and preheat roller frames to match the thickness of thermoplastic to be bonded. For example, match lightweight material with the 1000W wedge and 2 roller preheat frame or medium weight material with a 1500W wedge and 4 roller preheat frame. Thick coated textiles are best welded with the 2000W wedge and 6 roller preheat frame for optimum speeds. Intended for in-house welding fabrication of various thermoplastics including PVC, PE, PU, PP & LLDPE.

#SW72610: Spec High Speed Welder, 2 Roller Preheat, 25mm (1") Wedge, 220V
#SW72615: Spec High Speed Welder, 2 Roller Preheat, 40mm (1-1/2") Wedge, 220V
#SW72620: Spec High Speed Welder, 2 Roller Preheat, 50mm (2") Wedge, 220V
#SW72640: Spec High Speed Welder, 4 Roller Preheat, 25mm (1") Wedge, 220V
#SW72645: Spec High Speed Welder, 4 Roller Preheat, 40mm (1-1/2") Wedge, 220V
#SW72650: Spec High Speed Welder, 4 Roller Preheat, 50mm (2") Wedge, 220V
#SW72651: Spec High Speed Welder, 6 Roller Preheat, 25mm (1") Wedge, 220V
#SW72652: Spec High Speed Welder, 6 Roller Preheat, 40mm (1.5") Wedge, 220V
#SW72653: Spec High Speed Welder, 6 Roller Preheat, 50mm (2") Wedge, 220V

**MICRO OVERLAP WEDGE WELDER**

As a basic overlap welder, the Micro provides the benefits of hot wedge overlap welding from a small, lightweight machine. The powerful wedge delivers excellent heat for bonding medium to thicker coated textiles and guide edges keep the material in good alignment. The open style frame and retractable wedge make for easy loading. Temperature and speed controls are in easy reach of the operator. The base fits perfectly in our Track Section for simple one-person operation as either a stationary or self-propelled welder. Order either 120V or 220V Micro Wedge Welder and add Micro In-house Wheel Base Assembly.

#MM0100.1: 120V Micro Wedge Welder
#MM0100: 220V Micro Wedge Welder
#MM0115: Micro In-House Wheel Base Assembly
Quality design, maximum performance, and excellent value all combine in the Aero Automatic Hot Air Welder. The Aero is built tough with a rugged 3 piece frame milled from aluminum plus stainless steel hardware for great strength and minimal corrosion. The unique ‘dashboard’ instrumentation provides an “at a glance” viewing of the welding parameters. The 1.5” (40mm) air nozzle is specifically designed to deliver greater air flow while the modular aspect of the heat source provides easy servicing. The heavy weight gives greater pressure for bonding thicker coated textiles. The brushless drive motor means years of maintenance free service and production speeds can approach 26 ft (8m) per minute. The newest choice in performance automatic hot air welder is Made in America!

#AW0100: Aero Hot Air Welder, 230V

**Power:** 230V, 4000W  
**Temperature:** 0-1150° F (620°C)  
**Speed:** 0-30ft/min (9m+) (depending on material thickness and ambient conditions)  
**Seam Width:** 1.5” (40mm)  
**Weight:** 89lbs (Including (2) 10lbs weights)
Simplicity and efficiency combine in the Walkable Automatic Hot Air Welder. The modular heat source design delivers a greater flow of air while combined with a well engineered nozzle for excellent preheat. Heavy weight provides good pressure for bonding thicker coated textiles or can be removed for lighter weight fabrics. Simple controls and a stand up steering handle make for easy operation. Use the Walkable for your overlap and variable pocket size weld finishes. Available in a convenient 110V power source or 230V for greater heating capacity.

Power: 110V, 2200W or 220V, 3400W  
Temperature: 0-1150° F (620°C)  
Speed: 0-20ft/min (6m+) (depending on material thickness and ambient conditions)  
Seam Width: 1” (25mm) or 1.25” (30mm) or 1.5” (40mm)  
Weight: 65lbs (Including (1) 10lbs weight)

Hem Guide

Perfect for the finishing of banner edges, the optional Hem Guide for the Walkable provides an easy way of producing flat hem style welds. Easy to install and use, the guide helps to pre-fold the edge of vinyl coated textiles and hold the correct size thru the welding process.  
#WW0108: 25mm, #WW0109: 30mm/40mm
WALKABLE REINFORCEMENT TAPE WELDER

Excellent for your side curtain, truck cover, and tent fabrication, the Walkable Reinforcement Tape Welder has the performance to apply a 2" (50mm) coated webbing efficiently. This 230V unit delivers a greater airflow through the unique nozzle to pre-heat material and tape before bonding together under the pressure of a heavy weight system.

HAND HELD HOT AIR WELDERS

Sinclair Ergo Grip Hot Air Welding Gun
#42-0151SE: 110V, 1600W
For all your hand-held welding needs. Features ergonomical grip for comfort and heat shield to help prevent accidental contact. Variable temperature control to 1300°F (700°C). Nozzle sold separately.

Sinclair Tube Grip Hot Air Welding Gun
#42-0151T: 110V, 1650W
Traditional round or barrel style handle. Features exclusive dual staged fan for strong 400 l/min airflow. Variable temperature control to 1300°F (700°C). Nozzle sold separately.

Vinyl Repair Kit
#42-0110T: 110V, 1650W
Ideal for small jobs, patch and repair work. Kit includes Sinclair Tube Grip Welding Gun, 20mm Nozzle, 40mm Nozzle, Pencil Tip, Silicone Roller, Scissors, Sinclair Duffle Bag & Hat. Kit Also available with Sinclair Ergo Grip Welding Gun #42-110SE.