



SINCLAIR
equipment company

WEDGE WELDING * IMPULSE WELDING * PRODUCTION SYSTEMS

TRIAD WEDGE WELDING SYSTEM



U.S. Patent No. 5,865,942



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.

THE STANDARD TRIAD CAN ACHIEVE THE FOLLOWING WELDS:

(specify wedge size)



Overlap Weld



Hem Weld



Fin Weld



Overlap Weld - 1/2" to 2" weld width



Sleeve Weld - 1" diameter and up



Hem Weld - Adjustable pocket size



Insert Cable Weld - Insert cable into hem while welding, 7/8" max.



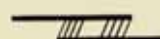
Fin Weld - 1/2" to 2" weld width



Tape Weld - Up to 2" weld width



Tube Weld - 1-1/2" diameter and up



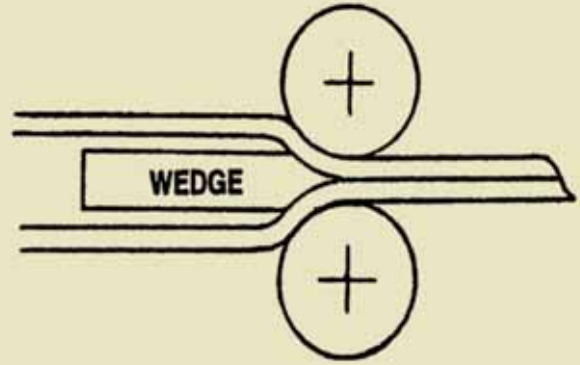
Channel Weld - Using split wedge

Create Additional Welding Styles with your imagination!

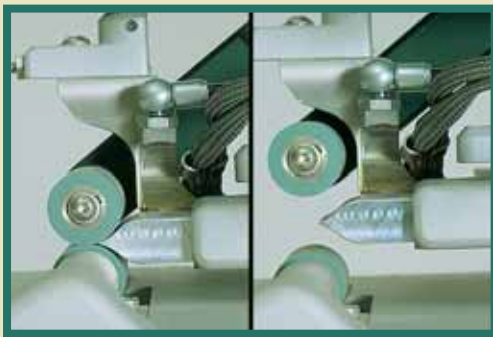
TRIAD WEDGE WELDING SYSTEM

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.

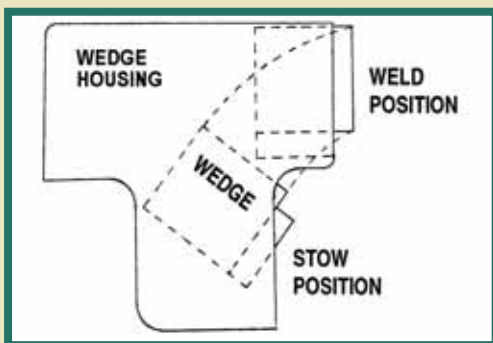


PATENTED SELF-CENTERING WEDGE

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.

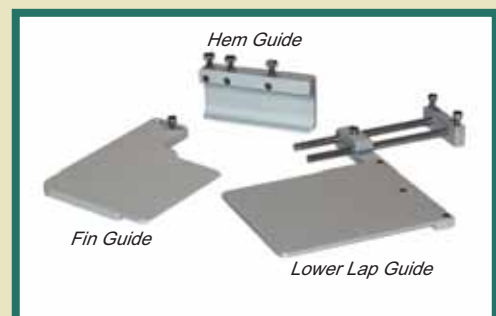


EXCLUSIVE WEDGE HOUSING

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.

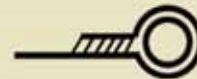


HEM CORD ATTACHMENT



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.

HEM CORD



← A unique front guide is used to position the cord and pre-fold the material as it enters into the Triad.



← 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.

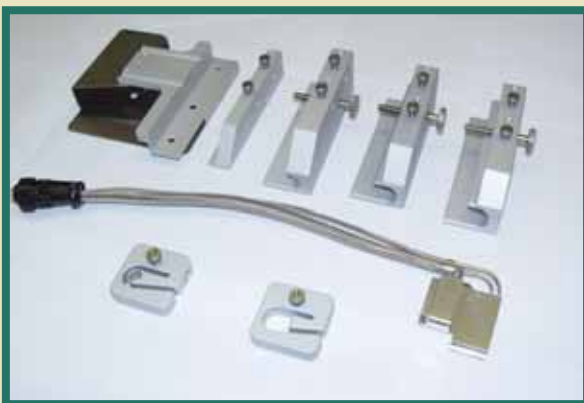
The Hem Cord Attachment should be ordered according to size of cord or rope to be used.

3/32" to 1/4" (3-6mm), 120V or 240V

5/16" to 1/2" (7-13mm), 120V or 240V

9/16" to 5/8" (14-16mm), 120V or 240V

The Hem Cord Attachment is also available with a 1.5" (38mm) weld width and a 2" (51mm) weld width.



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)

Note: Other sizes of Hem Front Guide and Outer Hem Cord Guide can be purchased separately. (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.

FLAT HEM



← A unique front guide is used to pre-fold and position the material for initial set up as it enters into the Triad.



← 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. In addition, see the Vinyl Flat Hem/Hem Cord Kit to have both style welds in one.

The Flat Hem Attachment is also available with a 1.2" (30.5mm) wedge for an approximate 1.5" (38mm) finished size or a 1.5" (38mm) wedge for an approximate 1.8" (48mm) finished size.



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)

ACRYLIC TAPE ATTACHMENT



OVERLAP ACRYLIC



HEM CORD ACRYLIC



FLAT HEM ACRYLIC

The Acrylic 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 and flat hem welds with your existing Triad Wedge Welder.



THE ACRYLIC 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)



THERMAL BONDING TAPE



Uniseam FR Tape



3M™ Stitchless Awning Bonding Film

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.*

THIN MATERIAL ATTACHMENT



A unique attachment for 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.

TUBE GUIDE ATTACHMENT



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.

ATTACHMENT KITS



VINYL FLAT HEM/HEM CORD KIT *Includes:*

- Flat Hem Attachment, 1" (25mm)
- Hem Cord Outer Guide 3/32" - 1/4"
- Hem Cord Outer Guide 5/16" - 1/2"
- Hem Cord Front Guide 5/16" - 5/8"
- 1-1/2" Rollers w/Hardware (2qty)
- Wedge Heater Lead Bracket



ULTIMATE WELDING ATTACHMENT *Includes:*

- Acrylic Tape Attachment
- Hem Cord Front Guide 5/16" - 5/8"
- Hem Cord Outer Guide 3/32" - 1/4"
- Hem Cord Outer Guide 5/16" - 1/2"
- Hem Cord Wedge w/Heaters, 1" (25mm)
- Hem Cord Wedge Housing Assembly
- Wedge Heater Lead Bracket
- Flat Hem Outer Guide

TRIAD DIGITAL GRAPHICS PACKAGE



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).

OVERLAP



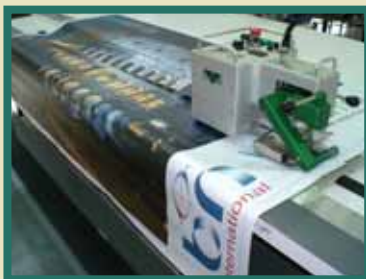
FLAT HEM



HEM CORD



POLE POCKET



Vacuum Assisted Overlap



Hem Weld, Poland



Overlap Registration, France



Pole Pocket Weld, Uruguay



Track Welding on Floor



Track/Table Flat Hem Weld, USA

SPECIAL BUILT TRIADS



TRIAD ACRYLIC 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.



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 a 1.5" (38mm) standard wedge and housing.



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.



TRIAD DEDICATED HEM WELDER
Designed with a large opening for a fold of material, this Triad is capable of only the hem style welds. Built with Hem Cord Attachment for 3/32" to 1/4" (3-6mm) cord size.

TRACK



For use with both Triad and Spec Wedge Welders



Prefabricated 5' 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. Just position the material with the magnets provided for the proper overlap and let the machine weld down the track. A great labor saver!



The 5' (1.5m) Track Section includes: 20-gauge galvanized steel section, track connector, hardware and magnets. 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.



SPEC WEDGE WELDING SYSTEM

SPECIFIC WELDERS FOR SPECIFIC APPLICATIONS



U.S. Patent No. 5,865,942

SINGLE FUNCTION WELDERS AT AN AFFORDABLE PRICE

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.



Wedge Swing-out

An exclusive feature found only on the Spec line of Wedge Welders



Spec Mirror Image

SPEC WEDGE WELDING SYSTEM



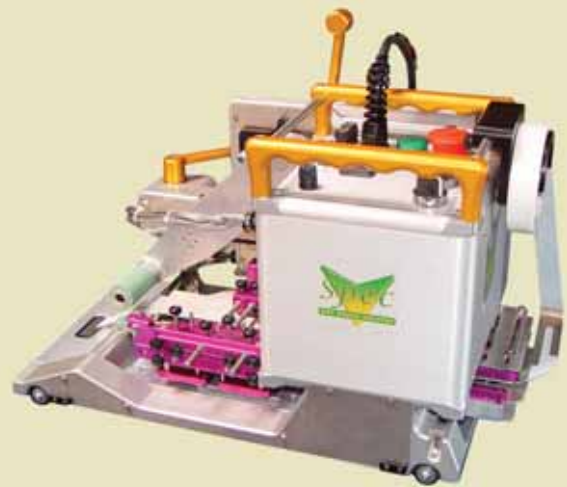
SPEC OVERLAP WELDER



SPEC OVERLAP ACRYLIC TAPE WELDER



SPEC HEMMING WELDER



SPEC HEMMING ACRYLIC TAPE WELDER



SPEC HIGH SPEED WELDER



SPEC THICK MATERIAL WELDER

SPEC OVERLAP WELDER



SPEC OVERLAP WELDER

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.



SPEC OVERLAP ACRYLIC TAPE WELDER

The Spec Overlap Acrylic 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.



THERMAL BONDING TAPE



Uniseam FR Tape



3M™ Stitchless Awning Bonding Film

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.*

SPEC HEMMING WELDER



SPEC HEMMING WELDER

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.



Flat Hem Pressure Arm and 2" Pressure Rollers

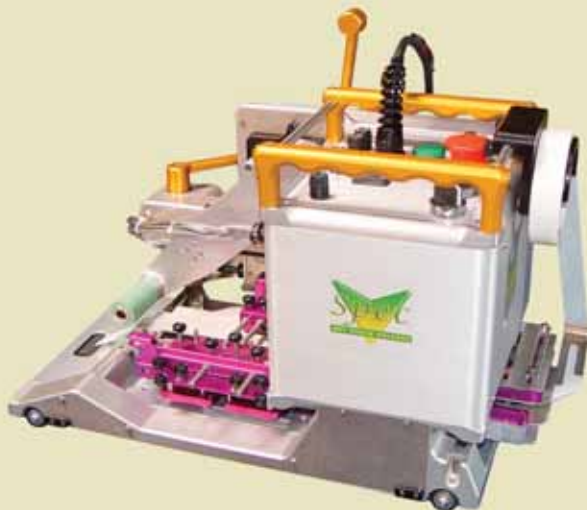
FLAT HEM



HEM CORD



POLE POCKET

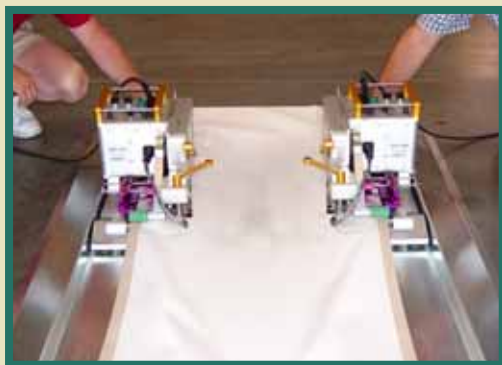


SPEC HEMMING ACRYLIC TAPE WELDER

The Spec Hemming Acrylic Tape 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, waterproof, and strong finish.

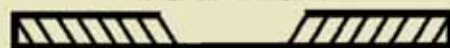


Thermal Bonding Tape Guide

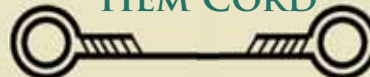


Mirror Image Simultaneous Welding

FLAT HEM



HEM CORD



POLE POCKET



SPEC HIGH SPEED 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 two different hot wedges and preheat roller frames to match the thickness of thermoplastic to be bonded. Match an unsupported light to medium weight material with the 1000w wedge and 2 roller preheat frame or for medium to heavy weight supported materials with a 1500W wedge and 4 roller preheat frame. Intended for in-house welding fabrication of various thermoplastics including PVC, PE, PU, PP & LLDPE.



1,000 Watt Wedges



1,500 Watt Wedges



Truck Side PVC Welding, Italy



PE Hay Cover Welding, USA



40mm, 1,500 Watt Split Wedge



Preheat Roller Frames



SPEC THICK MATERIAL WELDER

For Geomembrane and Related Materials



The Spec Thick Material Welder provides incredible performance for the welding of heavier weighted thermo-plastic materials. As a 240V power supply and welding the overlap style, the unique pre-heat roller system will melt the material coating for nearly 3". This long pre-heat is an excellent solution for the welding of geomembrane materials and can possibly increase production time with faster welding speeds.



2000W Spec Thick Material Split Wedge



Unique 6-roller pressure pre-heat system applied over the length of the wedge both top and bottom for increased material preheat, resulting in faster welding speeds.



SPEC KEDER SYSTEM



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. Available in 110V or 240V.



Adjustable Guide System for Various Cord/Flap/Seam Sizes

Weldable PVC Cord and Keder Material Sold Separately

KEDER MATERIAL

WELDABLE PVC CORD



Various Widths Available



6, 7.5, 10, 12mm



IMPULSE SEALING SYSTEM



Introducing the new Impulse Sealing System for PVC and acrylic coated material welding. With no dangerous irradiation or hazardous fumes, impulse welding is clean, efficient, and easy to use. Welding styles of overlap, hem, pocket, backlit and tape can be performed with a seam width of either $\frac{1}{4}$ ", $\frac{1}{2}$ ", and 1". The welding length is 51" with optional lateral extension tables of 39" for either side. Uniform temperature and proper cooling cycle is provided by the control panel with 20 programmable settings to produce a strong bond and smooth surface. Perfect for digital print finishing, window screen & blinds manufacturing, and awning fabrication. The Impulse Sealing System requires 240V single phase power and compressed air of 6 bar.



User Friendly, Programmable Interface



SINCLAIR PRODUCTION SYSTEMS

CUTTING, WELDING & GROMMETING
VERSATILITY * DURABILITY * AFFORDABILITY * WILL BUILD TO SUIT

The Sinclair Production System is designed to provide a complete production work station for cutting, welding and grommeting of various fabrication projects. The Main Vacuum Table for welding is the heart of the system. Additional tables can be added to increase the work surface area for welding and provide space for other finishing needs. We offer a precision rotary cutting system and a full line of grommeting machines to compliment the welding. All work is done from a clean, durable work surface and offers versatility to change and grow as needed. Depending on your facility size and layout, our production system is flexible to meet your requirements and we can build to suit your individual needs. A Sinclair Production System costs less than some other welders alone!



10' MAIN VACUUM TABLE

This 10' (3.05m) Main Vacuum Table is the heart of the Vacuum Table Systems, and is the base unit to build from. You can build your complete Production System from here to include 8' Extension Vacuum Tables, Filler Tables, Cutting Systems and Grommet Machines. The Main Table includes blower motor, switches, vacuum tubes for 7' 10" (2.39m) of usable welding length, adjustable legs for leveling, material hopper, upright cable system for power cord handling, bolt together table system, powder coated steel construction, and is plumbed to accept additional tables. You can add up to 3 additional 8' Vacuum Tables before needing an additional blower motor or 10' Vacuum Table.



8' EXTENSION VACUUM TABLE

The 8' (2.44m) Extension Table has all the quality construction as the Main 10' Vacuum Table without the blower motor and electronics. These 8' Extensions will bolt to the 10' Main Vacuum Table to align the track system for continuous welding.



8' FILLER TABLE

The 8' (2.44m) Filler Table will extend the work surface to match the 8' Vacuum Tables. Same quality construction for a clean, sturdy work station.



10' FILLER TABLE

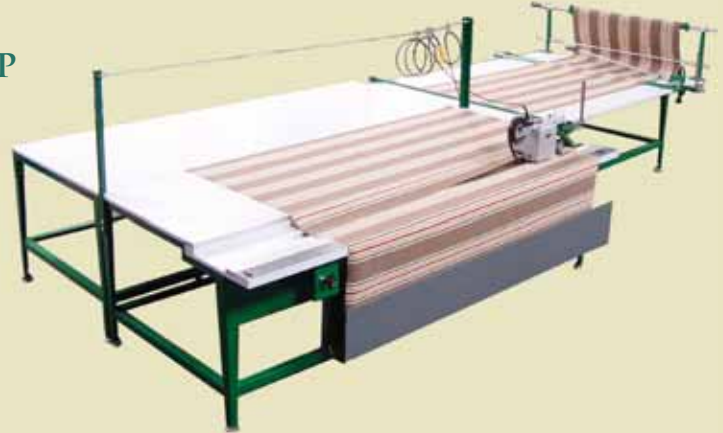
The 10' (3.05m) Filler Table will extend the work surface to match the 10' Vacuum Tables. Same quality construction for a clean work station.

TABLE CONFIGURATION EXAMPLES

BUILD YOUR OWN WORKSTATION WITH OUR BOLT-TOGETHER SYSTEM

CUTTING & WELDING 3 TABLE SET-UP

- 10' Main Vacuum Table
7' 10" (2.39m) Usable Welding Length
- 10' Filler Table
- 6' x 8' Cutting Table



CUTTING, WELDING, GROMMETING 4 TABLE SET-UP

- 10' Main Vacuum Table
- 8' Extension Vacuum Table
15' 10" (4.83m) Usable Welding Length
- 10' Filler Table
- 6' x 8' Cutting Table



ROTARY BLADE CUTTING MACHINES



The ST2000 Cutting System from Sinclair offers precise cutting and positioning for most all materials. System includes adjustable unrolling device, clamping device and cutting machine. Features automatic on/off cutting when cutter is moved from parked position, mounted sharpening stone, and available in cutting widths of 71" (180cm), 80.5" (205cm). (71" cutter pictured on left, table not included).

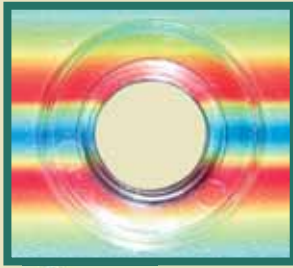
The Clamping Device that is included with the Cutting System serves two purposes. It acts as a measuring device as well as clamping and stacking the material in place to be cut. Position this bar for length of cut and lift the device to hold and stack your cuts.



6' BY 8' TABLE FOR ST2000

This 6' x 8' table is designed to accept our 71" (180cm) ST2000 Rotary Blade Cutter. The table can also be reconfigured to accept wider cutting rails for longer cutting machines. Built of the same quality construction and intended to apply directly to our other Production System products.

PLASTIC GROMMETS AND SETTING MACHINES



CLEAR PLASTIC GROMMETS *See the Color, Not the Grommet*

Transparent Grommets Priced per 1000
1/2" (12mm), Eyelet
1/2" (12mm), Washer



J-35 MANUAL PLASTIC GROMMET PRESS, 1/2" (12MM)

Our basic hand press for 1/2" inner diameter (12mm) plastic grommets. Two stroke action; first to punch hole in the material and second, after placing eyelet and washer, to compress and set the grommet.



J-22 MANUAL PLASTIC GROMMET PRESS, 1/2" (12MM)

Light duty hand operated grommet press for setting 1/2" inner ring opening (12mm) plastic eyelet and washers. With one pull, the J-22 will punch hole and compress/set eyelet & washer in digital print media and various other textiles. Die is adjustable for various thicknesses; handle is reversible for opposite side operation. Consider for low to medium volume usage; perfect for small print shops.



Shown w/Wheel Base



J-31 PNEUMATIC PLASTIC GROMMET MACHINE 1/2" (12MM)

Low cost, pneumatic operated grommet machine for setting 1/2" inner ring opening (12mm) plastic eyelet and washers. With a compact design in mind, the J-31 punches hole and sets eyelet and washer in one step. Operator places eyelet & washer in position, and then pushes button on top to activate. Safety ring extends for operator protection. The J-31 can be used with a small air compressor and minimal maintenance is required. Perfect for medium volume usage.



Shown w/Wheel Base



J-239 AUTOMATIC PLASTIC GROMMET MACHINE, 1/2" (12MM)

Designed for high volume use, the J-239 is our fully automatic grommet machine for setting 1/2" inner ring opening (12mm) plastic eyelet and washers. In a single foot pedal operation, the eyelet and washer are positioned and compression/setting takes place. Clear face/hand guard provides operator protection. A wide variety of materials (PVC, textiles, webbing, canvas, etc.) can be used and the die can be adjusted for various thicknesses of material. Available in 120V or 240V and requires compressed air. Robust construction for heavy use, the J-239 includes a sturdy table mount. The J-239 is also available on wheels for convenient shop use. Great throat depth approximately (150mm or < 6") for wide range of setting applications.

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