

Catalog 110 • May 2000

# Motionless Mixers for Adhesives and Sealants

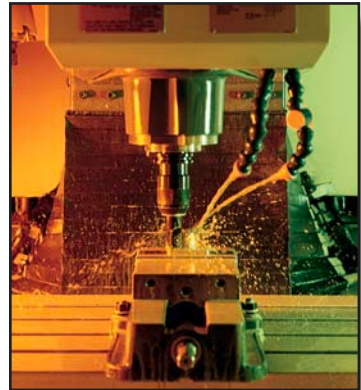


# Mission Statement

**TAH Industries, Inc.** is a worldwide supplier of motionless mixers and related equipment. We are a partnership of customers, suppliers and employees committed to providing quality products. Our mission is to continually improve our products and services and to ultimately exceed our customers' needs, allowing us to prosper as a business.



Our engineering staff utilizes modern Unigraphics & CAD/CAM Technology.



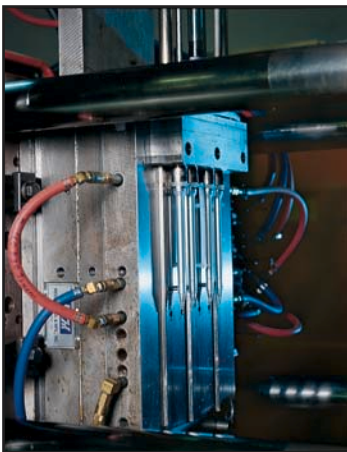
CNC equipment for all our machining needs.



Our state-of-the-art molding machines run 24 hours a day.



Superior Customer Service!



Complex in-house mold manufacturing.



Dedicated R&D lab for adhesive testing & stringent quality control.

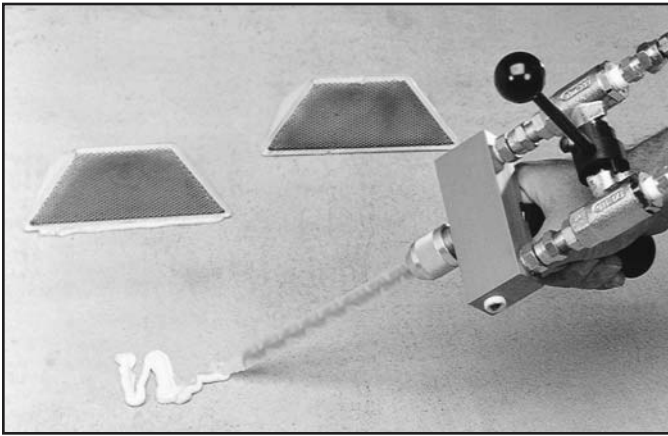
For mixing reactive adhesives and sealants, TAH Industries offers a complete line of mixers. Our mixers have proven to be reliable, cost-effective and simple to maintain. This range of products, combined with our knowledge of meter/mix equipment, gives us the capability to serve your total mixing requirements.

Maintaining a mixer used with reactive resins can be a time-consuming and expensive task. A plugged mixer means lost production. A partially plugged mixer means an inadequate mix and poor product quality. In addition, solvents used to flush the mixers are expensive and potentially hazardous.

TAH Industries recognizes these problems and has developed a line of mixers that is simple to maintain. We specialize in both disposable mixers and modular metal mixers that can be disassembled and cleaned.

Today, TAH Industries is the only company that offers this complete line of motionless mixers. We have supplied mixers to the **Construction, Electrical, Automotive, and Assembly Industries**, and have the experience to assist you in selecting the right model for your application.

Whatever the mixing job - high or low pressure, solvent flush or disposable — **TAH's Motionless Mixers** are your most cost-effective solution.



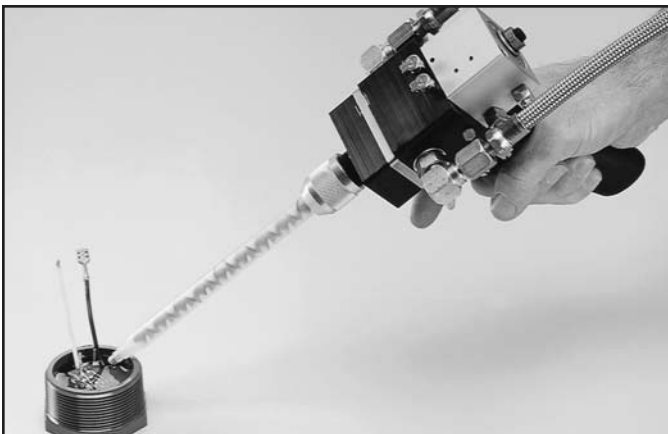
## CONSTRUCTION

Bonding highway markers



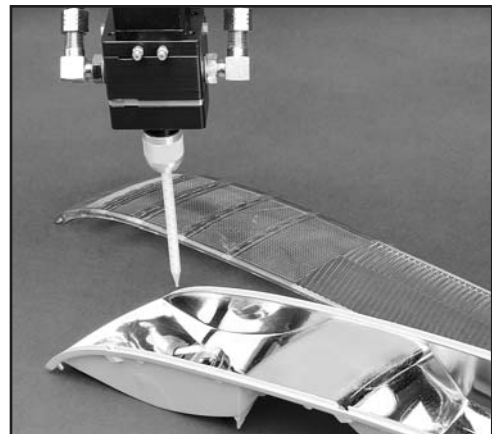
## ASSEMBLY

Bonding golf club components



## ELECTRICAL

Potting and Encapsulating



## AUTOMOTIVE

Bonding headlight components

The **Spiral “KnifeEdged” Mixers** were developed for mixing adhesives and sealants. These mixers consist of a series of left and right hand helixes, the ends of which are knife edged. This patented feature provides a more streamlined geometry. Consider these advantages:

- **LONGER LIFE**
- **30% GREATER FLOW RATE**
- **FLUSHES WITH LESS SOLVENT**

A complete line of disposable plastic nozzles and high-pressure pipe mixers is available.



### Application

The Spiral Mixer™ is recommended for most adhesive applications. Typical applications are designated in the table to the right.

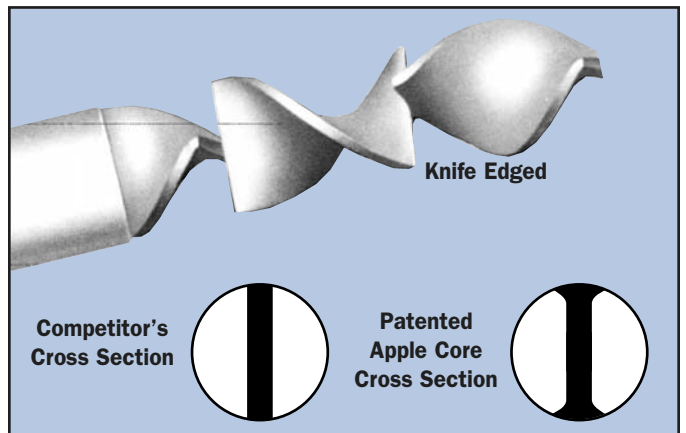
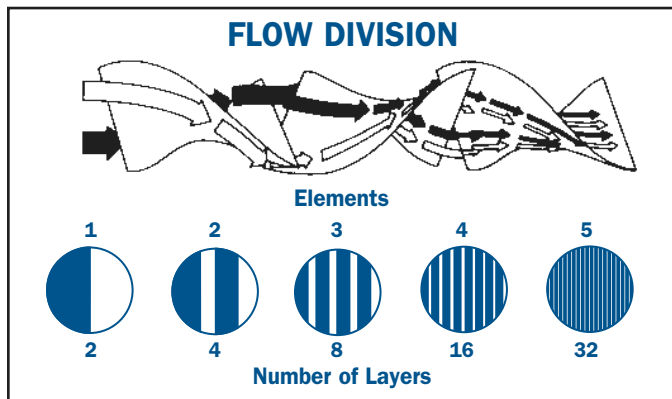
Application	Number of Elements
Silicones	20-30
Polysulfides	24-32
Urethanes	24-36
Epoxies	15-24
Acrylics	8-20

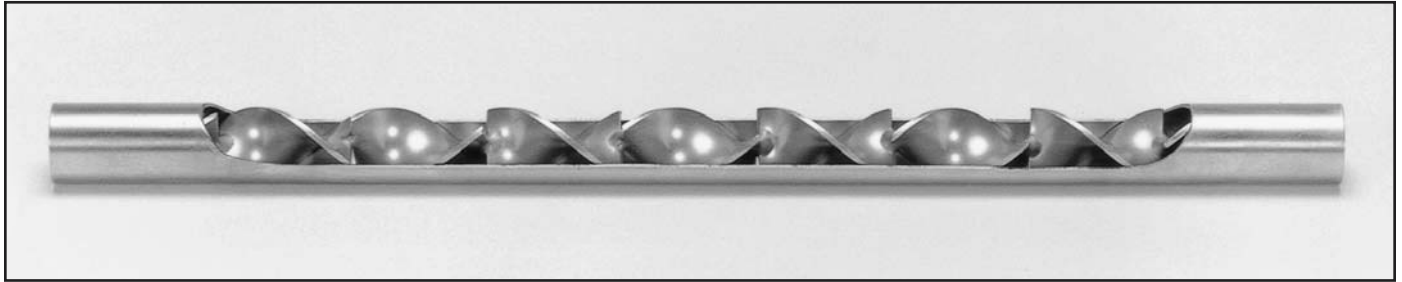
### Technology

The mixer consists of a series of left and right hand helical elements. When fluids are pumped through the mixer, they are progressively divided and recombined. The process is called inversion and results in a layering phenomenon. The number of layers or striations produced is exponential to the base 2<sup>n</sup>, where n is the number of elements.

Mixers of this configuration produce plug flow, wherein the fluid particles pass through the mixer in the same sequence in which they enter. To ensure a uniform output, each component must be metered in proper ratio and free of air.

Competitive mixers have a flat edge, where material can accumulate and cause plugging problems. Our **Knife Edged** design is more streamlined. In addition to the Knife Edge, TAH’s plastic mixers have an **Apple Core cross section**. This patented feature allows complete mixing in a shorter length.





The **70 Series** Spiral Mixers are designed for high-pressure applications with two component adhesives and sealants. The mixers consist of a series of left and right hand spiral elements, which have been “edgesealed” into a tube. The spiral tube mixer is available in four diameters and with 15 to 48 elements. The elements have been microbrazed along their complete length and *cannot be removed from the tube*. Consider the advantages of this all-stainless steel assembly:

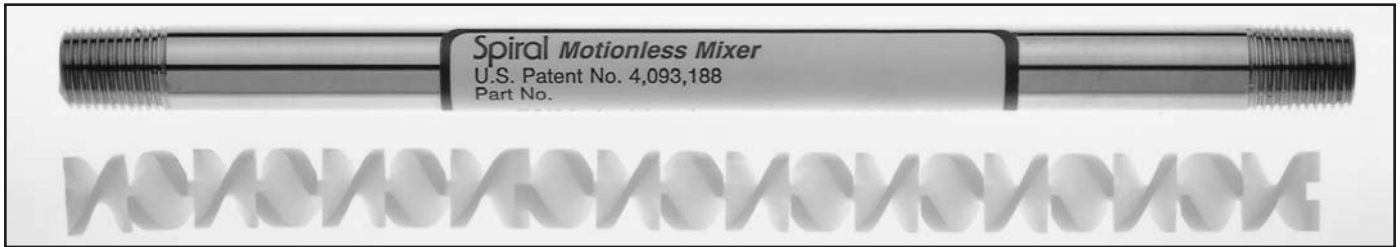
- **Moderate Price** — Offers significant savings over competitive mixers.
- **Streamline Geometry** — The contour of the elements ensures that the mixer flushes clean with less solvent.
- **Resists Furnace Warpage** — The tube mixers are manufactured with heavy walled tubing, which resists warpage during furnace cleaning and increases the life of the mixer. The maximum furnace temperature should not exceed 1250° F (676° C).

### SPECIFICATION:

**Elements:** 316 Stainless Steel, non-removable

**Housing:** 304 Stainless Steel with plain ends

PART NO.	ELEMENT			HOUSING					
	Diameter		Mixing Elements	Length		Outside Diameter		Pressure Limitation	
	inch	mm		inch	cm	inch	mm	psi @ 300°F	bar @ 150°C
070-317	.113	2.87	17	4.88	12.40	.187	4.75	6900	476
070-321	.113	2.87	21	6.00	15.24	.187	4.75	6900	476
070-327	.113	2.87	27	7.50	19.05	.187	4.75	6900	476
070-421	.187	4.75	21	7.00	17.78	.250	6.35	4200	290
070-427	.187	4.75	27	9.25	23.50	.250	6.35	4200	290
070-434	.187	4.75	34	11.50	29.21	.250	6.35	4200	290
070-448	.187	4.75	48	13.00	33.02	.250	6.35	4200	290
070-621	.292	7.42	21	11.00	27.94	.375	9.53	3600	248
070-627	.292	7.42	27	14.00	35.56	.375	9.53	3600	248
070-815	.418	10.62	15	11.88	30.18	.500	12.70	2800	193
070-821	.418	10.62	21	16.38	41.61	.500	12.70	2800	193
070-832	.418	10.62	32	24.75	62.87	.500	12.70	2800	193



### SPECIFICATION:

**Elements:** Polyplas™, removable  
**Housing:** 304 Stainless Steel

The **85 Series** is designed for high-pressure applications. The mixer features a sturdy metal housing with disposable plastic mixing elements. The housing is made from heavy walled stainless pipe that resists dents and distortion. For routine maintenance, the mixer can be pushed out and cleaned or replaced. Consult factory for replacement mixers.

PART NO.	ELEMENT			HOUSING						
	Diameter		Mixing Elements	Ends MNPT	Length		Outside Diameter		Pressure Limitation	
	inch	mm			inch	cm	inch	mm	psi @ 75°F	bar @ 23°C
084-206	.094	2.39	6	Plain	1.25	3.18	.127	3.23	5000	345
084-212	.094	2.39	12	Plain	1.25	3.18	.127	3.23	5000	345
084-218	.094	2.39	18	Plain	1.83	4.65	.127	3.23	5000	345
084-224	.094	2.39	24	Plain	2.40	6.10	.127	3.23	5000	345
084-230	.094	2.39	30	Plain	2.99	7.59	.127	3.23	5000	345
084-312	.125	3.18	12	Plain	1.50	3.81	.187	4.75	5800	400
084-318	.125	3.18	18	Plain	2.20	5.59	.187	4.75	5800	400
084-324	.125	3.18	24	Plain	2.80	7.11	.187	4.75	5800	400
084-330	.125	3.18	30	Plain	3.50	8.89	.187	4.75	5800	400
084-408	.189	4.80	8	Plain	1.50	3.81	.250	6.35	4300	297
084-416	.189	4.80	16	Plain	2.70	6.86	.250	6.35	4300	297
084-424	.189	4.80	24	Plain	4.00	10.16	.250	6.35	4300	297
084-432	.189	4.80	32	Plain	5.30	13.46	.250	6.35	4300	297
085-108	.248	6.30	8	1/8"	2.38	6.05	.405	10.29	7700	530
085-116	.248	6.30	16	1/8"	4.38	11.13	.405	10.29	7700	530
085-124	.248	6.30	24	1/8"	6.38	16.21	.405	10.29	7700	530
085-132	.248	6.30	32	1/8"	8.38	21.29	.405	10.29	7700	530
085-32-012	.314	8.00	12	1/4"	4.10	10.41	.540	13.72	8400	580
085-32-018	.314	8.00	18	1/4"	6.00	15.24	.540	13.72	8400	580
085-32-024	.314	8.00	24	1/4"	7.70	19.56	.540	13.72	8400	580
085-32-030	.314	8.00	30	1/4"	9.50	24.13	.540	13.72	8400	580
085-212	.366	9.30	12	1/4"	4.20	10.67	.540	13.72	8500	585
085-218	.366	9.30	18	1/4"	6.20	15.75	.540	13.72	8500	585
085-224	.366	9.30	24	1/4"	8.20	20.83	.540	13.72	8500	585
085-230	.366	9.30	30	1/4"	10.00	25.40	.540	13.72	8500	585
085-312	.497	12.62	12	3/8"	5.50	13.97	.675	17.15	7250	500
085-318	.497	12.62	18	3/8"	8.00	20.32	.675	17.15	7250	500
085-324	.497	12.62	24	3/8"	10.70	27.18	.675	17.15	7250	500
085-330	.497	12.62	30	3/8"	13.12	33.32	.675	17.15	7250	500
085-410	.630	16.00	10	1/2"	5.80	14.73	.840	21.34	7250	500
085-420	.630	16.00	20	1/2"	11.10	28.19	.840	21.34	7250	500
085-430	.630	16.00	30	1/2"	16.40	41.66	.840	21.34	7250	500
085-608	.784	19.91	8	3/4"	5.80	14.73	1.050	26.67	6000	415
085-616	.784	19.91	16	3/4"	11.10	28.19	1.050	26.67	6000	415
085-624	.784	19.91	24	3/4"	16.40	41.66	1.050	26.67	6000	415
085-632	.784	19.91	32	3/4"	21.70	55.12	1.050	26.67	6000	415



### SPECIFICATION:

**Elements:** 316 Stainless Steel, removable

**Housing:** 304 Stainless Steel Pipe  
Male Threaded Ends-NPT

This all-stainless mixer is rugged and reliable. The interior elements are available with either a Teflon® coating or plain stainless elements. The **100 Series** is modular. Each diameter is available in two lengths, with either six or twelve elements. For most applications, two modules should be coupled together using a pipe connector.

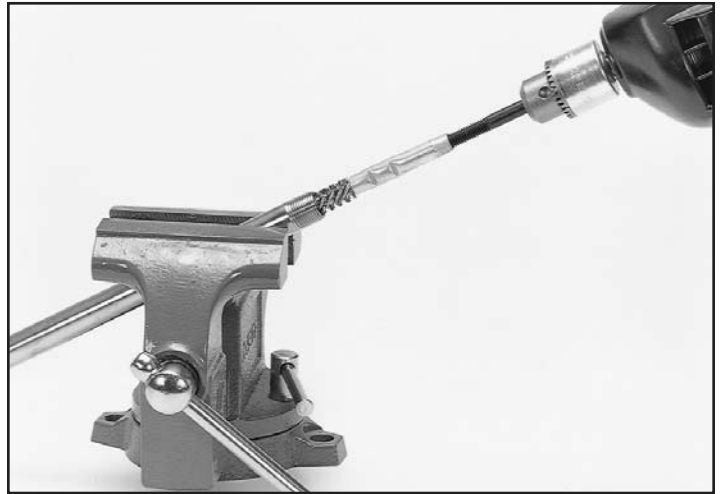
PART NO.		ELEMENT			HOUSING						
Stainless Elements	Teflon® Coated Elements	Diameter		Mixing Elements	Ends MNPT	Length		Outside Diameter		Pressure Limitation	
		inch	mm			inch	cm	inch	mm	psi @ 300°F	bar @ 150°C
100-106	102-106	.267	6.78	6	1/8"	2.75	6.99	.405	10.29	8750	600
100-112	102-112	.267	6.78	12	1/8"	5.38	13.67	.405	10.29	8750	600
100-206	102-206	.363	9.22	6	1/4"	3.75	9.53	.540	13.72	8500	585
100-212	102-212	.363	9.22	12	1/4"	7.00	17.78	.540	13.72	8500	585
100-306	102-306	.494	12.55	6	3/8"	5.00	12.70	.675	17.15	7250	500
100-312	102-312	.494	12.55	12	3/8"	9.50	24.13	.675	17.15	7250	500
100-406	102-406	.623	15.83	6	1/2"	5.75	14.61	.840	21.34	7250	500
100-412	102-412	.623	15.83	12	1/2"	11.00	27.94	.840	21.34	7250	500
100-606	102-606	.779	19.79	6	3/4"	7.75	19.69	1.050	26.67	6000	415
100-612	102-612	.779	19.79	12	3/4"	14.75	37.47	1.050	26.67	6000	415
100-806	102-806	1.032	26.21	6	1"	9.50	24.13	1.315	33.40	4500	310
100-812	102-812	1.032	26.21	12	1"	18.50	46.99	1.315	33.40	4500	310
101-206	103-206	1.580	40.13	6	1 1/2"	14.00	35.56	1.900	48.26	3000	207
101-212	103-212	1.580	40.13	12	1 1/2"	27.25	69.22	1.900	48.26	3000	207
101-606	103-606	2.035	51.69	6	2"	17.50	44.45	2.375	60.33	2500	170
101-612	103-612	2.035	51.69	12	2"	34.50	87.63	2.375	60.33	2500	170

**Pipe Connector** — The modular **100 Series** Pipe Mixers are coupled together with hex pipe connectors.

**Example:** To order a 3/4" Pipe Mixer with 24 Teflon® coated elements, order two Part No. 102-612 and one Pipe Connector Part No. 108-065C

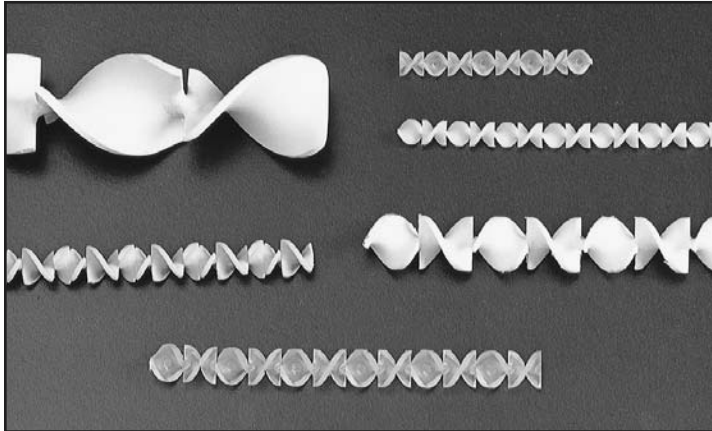


**Wire Brush** — After the elements have been removed, a residue remains on the inside wall of the pipe. As illustrated, this residue can be removed with a wire brush attached to an electric drill. Brush bristles are stainless steel to prevent contamination.



PART NO.	FEMALE THREADS NPT Inch	MATERIAL
108-015C	1/8	316SS
108-025C	1/4	316SS
108-035C	3/8	316SS
108-036C	3/8	Carbon Steel
108-045C	1/2	316SS
108-046C	1/2	Carbon Steel
108-065C	3/4	316SS
108-066C	3/4	Carbon Steel
108-085C	1	316SS
108-086C	1	Carbon Steel

PART NO.	PIPE OD		LENGTH	
	inch	mm	inch	cm
109-106WB	.405	10.29	5.0	12.7
109-112WB	.405	10.29	8.0	20.3
109-206WB	.540	13.72	6.0	15.2
109-212WB	.540	13.72	9.0	22.9
109-306WB	.675	17.15	7.0	17.8
109-312WB	.675	17.15	12.0	30.5
109-406WB	.840	21.34	8.0	20.3
109-412WB	.840	21.34	13.0	33.0
109-606WB	1.050	26.67	10.0	25.4
109-612WB	1.050	26.67	16.0	40.6
109-806WB	1.315	33.40	12.0	30.5
109-812WB	1.315	33.40	21.0	53.3



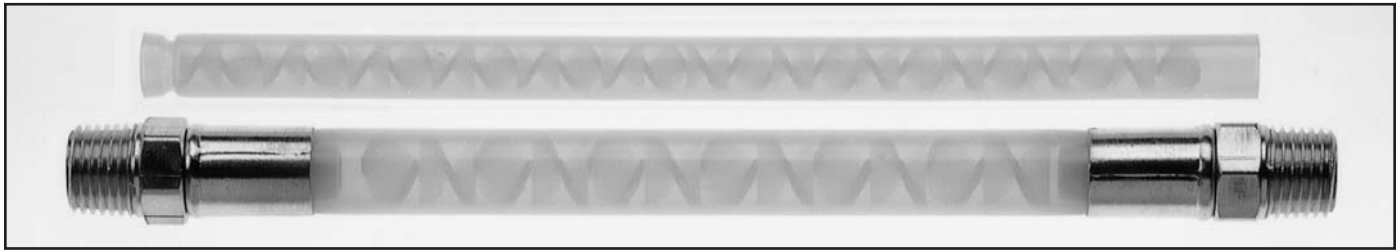
The plastic spiral elements were developed for adhesive and sealant mixing applications. The mixer consists of a series of left and right hand spiral elements. TAH's mixers have the patented "Apple Core" cross section. This patented geometry ensures:

- **LONGER LIFE**
- **30% GREATER FLOW RATE**
- **FLUSHES CLEAN WITH LESS SOLVENT**

The elements are injection molded in one operation. This procedure ensures excellent quality control and low unit cost. For adhesive and sealant applications, our Polyplas™ material is recommended. If required, TAH also offers these elements in other engineered plastics, such as Polypropylene and Kynar™ (consult factory for details).

**CHEMICAL RESISTANCE:** Polyplas™ is our proprietary plastic developed to have the toughness and chemical inertness required by the Adhesives and Sealants Industry. Polyplas™ is completely inert to all common solvents, such as MEK, acetone and methylene chloride. Its maximum service temperature is 250° F. Polyplas™ is not recommended for mixing water and acids.

PART NO.	ELEMENT					
	Diameter		Mixing Elements	Length		Material
	inch	mm		inch	cm	
121-09-012	.094	2.39	12	1.13	2.87	Polyplas™
121-012	.125	3.18	12	1.30	3.30	Polyplas™
121-116	.189	4.80	16	2.56	6.50	Polyplas™
121-216	.248	6.30	16	3.96	10.06	Polyplas™
121-224	.248	6.30	24	5.94	15.09	Polyplas™
121-32-012	.314	8.00	12	3.67	9.32	Polyplas™
121-312	.370	9.40	12	3.90	9.91	Polyplas™
121-324	.366	9.30	24	7.83	19.89	Polyplas™
121-412	.497	12.62	12	5.00	12.70	Polyplas™
121-418	.497	12.62	18	7.47	18.97	Polyplas™
121-510	.630	16.00	10	5.42	13.77	Polyplas™
121-608	.784	19.91	8	5.37	13.64	Polyplas™



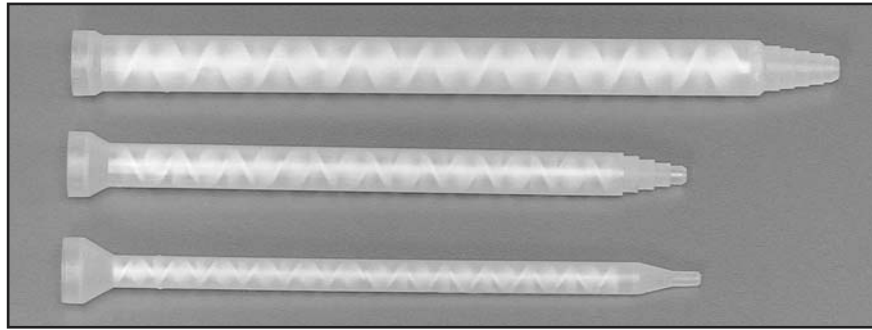
This all-plastic assembly is ideal for messy or short pot life adhesives. Its low cost allows disposal of the mixer instead of purging or burning. The housing is transparent, allowing the operator to inspect the condition of the mixer. The interior mixing elements are molded in Polyplas™. This proprietary plastic has the toughness and chemical resistance to be completely inert to all common solvents.

### SPECIFICATION:

**Elements:** Polyplas™, non-removable

**Housing:** Nylon or Nylon with brass threaded ends

PART NO.	ELEMENT			HOUSING						
	Diameter		Number of Elements	Ends MNPT	Length		Outside Diameter		Pressure Limitation	
	inch	mm			inch	cm	inch	mm	psi @ 75°F	bar @ 23°C
140-212	0.094	2.39	12	Plain	1.50	3.81	0.188	4.78	940	65
140-218	0.094	2.39	18	Plain	2.10	5.33	0.188	4.78	940	65
140-224	0.094	2.39	24	Plain	2.65	6.73	0.188	4.78	940	65
140-230	0.094	2.39	30	Plain	3.25	8.26	0.188	4.78	940	65
140-312	0.125	3.18	12	Plain	1.50	3.81	0.187	4.75	580	40
140-318	0.125	3.18	18	Plain	2.20	5.59	0.187	4.75	580	40
140-324	0.125	3.18	24	Plain	2.80	7.11	0.187	4.75	580	40
140-330	0.125	3.18	30	Plain	3.50	8.89	0.187	4.75	580	40
140-408	0.189	4.80	8	Plain	1.50	3.81	0.250	6.35	430	30
140-416	0.189	4.80	16	Plain	2.80	7.11	0.250	6.35	430	30
140-424	0.189	4.80	24	Plain	4.10	10.41	0.250	6.35	430	30
140-432	0.189	4.80	32	Plain	5.40	13.72	0.250	6.35	430	30
140-608	0.248	6.30	8	Plain	2.50	6.35	0.375	9.53	600	41
140-616	0.248	6.30	16	Plain	4.50	11.43	0.375	9.53	600	41
140-624	0.248	6.30	24	Plain	6.50	16.51	0.375	9.53	600	41
140-632	0.248	6.30	32	Plain	8.50	21.59	0.375	9.53	600	41
145-712	0.314	8.00	12	1/4"	7.10	18.03	0.437	11.10	550	38
145-718	0.314	8.00	18	1/4"	9.10	23.11	0.437	11.10	550	38
145-724	0.314	8.00	24	1/4"	10.70	27.18	0.437	11.10	550	38
145-730	0.314	8.00	30	1/4"	12.70	32.26	0.437	11.10	550	38
145-812	0.370	9.40	12	1/4"	7.50	19.05	0.500	12.70	460	32
145-818	0.370	9.40	18	1/4"	9.60	24.38	0.500	12.70	460	32
145-824	0.370	9.40	24	1/4"	11.50	29.21	0.500	12.70	460	32
145-830	0.370	9.40	30	1/4"	13.50	34.29	0.500	12.70	460	32
146-212	0.497	12.62	12	3/8"	8.50	21.59	0.630	16.00	350	24
146-218	0.497	12.62	18	3/8"	11.10	28.19	0.630	16.00	350	24
146-224	0.497	12.62	24	3/8"	13.50	34.29	0.630	16.00	350	24
146-230	0.497	12.62	30	3/8"	16.00	40.64	0.630	16.00	350	24
146-410	0.630	16.00	10	1/2"	9.40	23.88	0.760	19.30	300	21
146-420	0.630	16.00	20	1/2"	14.40	36.58	0.760	19.30	300	21
146-430	0.630	16.00	30	1/2"	19.70	50.04	0.760	19.30	300	21
146-608	0.784	19.91	8	3/4"	10.00	25.40	0.920	23.37	240	17
146-616	0.784	19.91	16	3/4"	15.10	38.35	0.920	23.37	240	17
146-624	0.784	19.91	24	3/4"	20.40	51.82	0.920	23.37	240	17
146-632	0.784	19.91	32	3/4"	25.60	65.02	0.920	23.37	240	17



### SPECIFICATION:

**Elements:** Polyplas™

**Housing:** Polypropylene

The **160 Series** Mixers offer significant advantages in meter/mix applications. The nozzles have a common oversized bell inlet. Dispensing valves and manifolds are available to transport the A and B materials into the mixer separately. Clean-up is simple. A metal jacket is recommended if the working pressure inside the nozzle exceeds 150 psi (10 bar).

OUTLET TIP			
PART NO.	ORIFICE		STYLE
	inch	mm	
160-4XX	.07	1.78	Slip Luer
160-6XX	.09	2.29	Slip Luer
160-7XX	.10	2.54	Stepped
160-8XX	.12	3.05	Stepped
161-2XX	.18	4.57	Stepped

#### Test Kit Available

Contains an assortment of various mixers of different models. Includes retaining nuts and sleeves.  
Part No. 160-TK

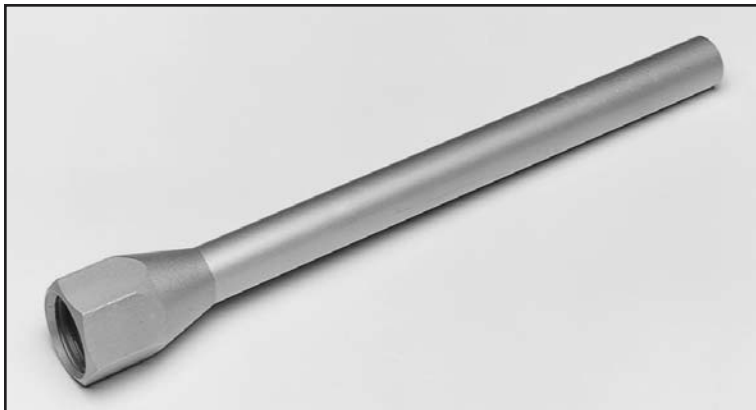
PART NO.	ELEMENT			HOUSING					
	Diameter		Number of Elements	Length		Outside Diameter		Pressure Limitation	
	inch	mm		inch	cm	inch	mm	psi @ 75°F	bar @ 23°C
160-408	0.189	4.80	8	2.62	6.65	0.300	7.62	500	34
160-416	0.189	4.80	16	3.90	9.91	0.300	7.62	500	34
160-424	0.189	4.80	24	5.18	13.16	0.300	7.62	500	34
160-432	0.189	4.80	32	6.48	16.46	0.300	7.62	500	34
160-448	0.189	4.80	48	9.04	22.96	0.300	7.62	500	34
160-608	0.248	6.30	8	3.56	9.04	0.370	9.40	360	25
160-616	0.248	6.30	16	5.46	13.87	0.370	9.40	360	25
160-624	0.248	6.30	24	7.46	18.95	0.370	9.40	360	25
160-632	0.248	6.30	32	9.49	24.10	0.370	9.40	360	25
160-648	0.248	6.30	48	13.14	33.38	0.370	9.40	360	25
160-718	0.314	8.00	18	6.96	17.68	0.461	11.71	330	23
160-724	0.314	8.00	24	8.84	22.45	0.461	11.71	330	23
160-732	0.314	8.00	32	11.44	29.06	0.461	11.71	330	23
160-812	0.366	9.30	12	5.48	13.92	0.510	12.95	300	21
160-818	0.366	9.30	18	7.28	18.49	0.510	12.95	300	21
160-824	0.366	9.30	24	9.15	23.24	0.510	12.95	300	21
160-830	0.366	9.30	30	11.24	28.55	0.510	12.95	300	21
160-840	0.366	9.30	40	14.14	35.92	0.510	12.95	300	21
161-212	0.497	12.65	12	6.71	17.04	0.660	16.76	270	19
161-218	0.497	12.65	18	9.08	23.06	0.660	16.76	270	19
161-224	0.497	12.65	24	11.60	29.46	0.660	16.76	270	19
161-230	0.497	12.65	30	14.09	35.79	0.660	16.76	270	19
161-236	0.497	12.65	36	16.63	42.24	0.660	16.76	270	19



### Retaining Nut

Aluminum retaining nuts are available to hold the **160 Series** nozzles onto adapters, manifolds and valves. These retaining nuts are used when a metal jacket is not required.

RETAINING NUT PART NO.		DESCRIPTION / MIXING NOZZLE PART NO.
TAH Standard 7/8–14 Thread	Alternative* 7/8–9 Thread	
165-36N	165-36N-A-9S	Aluminum Nut for 160-4XX & 160-6XX Mixers
165-37N	165-37N-A-9S	Aluminum Nut for 160-7XX & 160-8XX Mixers
165-38N	165-38N-A-9S	Aluminum Nut for 161-2XX Mixers



### One Piece Jacket

If the working pressure inside the **160 Series** nozzle is greater than 150 psi (10 bar), then we recommend that a metal jacket be used over the nozzle. TAH offers a new range of low cost, all one piece, jackets for our **160 Series** mixers. They are ideal for robotic applications, where repeatable positioning is required. All TAH manifolds and valves have a 7/8 – 14 thread. Consult factory for more details.

JACKET PART NUMBER		DESCRIPTION / MIXING NOZZLE PART NO.
TAH Standard 7/8–14 Inlet Thread	Alternative* 7/8–9 Thread	
165-616JL	165-616JL-9	Aluminum Jacket for 160-616 mixer
165-624JL	165-624JL-9	Aluminum Jacket for 160-624 mixer
165-632JL	165-632JL-9	Aluminum Jacket for 160-632 mixer
165-648JL	165-648JL-9	Aluminum Jacket for 160-648 mixer
165-718JL	165-718JL-9	Aluminum Jacket for 160-718 mixer
165-724JL	165-724JL-9	Aluminum Jacket for 160-724 mixer
165-732JL	165-732JL-9	Aluminum Jacket for 160-732 mixer
165-818JL	165-818JL-9	Aluminum Jacket for 160-818 mixer
165-824JL	165-824JL-9	Aluminum Jacket for 160-824 mixer
165-830JL	165-830JL-9	Aluminum Jacket for 160-830 mixer
165-840JL	165-840JL-9	Aluminum Jacket for 160-840 mixer
166-218J	166-218J-9	CS nut/Alum Jacket for 161-218 mixer
166-224J	166-224J-9	CS nut/Alum Jacket for 161-224 mixer
166-230J	166-230J-9	CS nut/Alum Jacket for 161-230 mixer
166-236J	166-236J-9	CS nut/Alum Jacket for 161-236 mixer

\* See page 14 for more details (Bell Inlet)



### Manifold

Two component manifolds are available which separately port the resin/hardener into the mixing nozzle. Clean up simply involves wiping the manifold face after the nozzle has been removed. To prevent back flow or cross contamination of reactive material, in-line check valves are available. Stainless steel manifolds are also available. Consult factory for details.

PART NO.	DESCRIPTION
175-43M	Aluminum Hand Held Manifold with two 1/8" FNPT Inlets
175-411M	Aluminum Block Manifold with two 1/8" FNPT Inlets
175-412M	Aluminum Block Manifold with two 1/8" FNPT Inlets & 1/4" FNPT Solvent Port
175-421M	Aluminum Block Manifold with two 1/4" FNPT Inlets
175-422M	Aluminum Block Manifold with two 1/4" FNPT Inlets & 1/4" FNPT Solvent Port
165-RC/01	Teflon® Ratio Check Cap and Nut
165-Cap/01	Teflon® Night Cap and Nut
200-61CV	Brass Check Valve with 1/8" MNPT Ports
200-51CV	Stainless Steel Check Valve with 1/8" MNPT Ports
200-62CV	Brass Check Valve with 1/4" MNPT Ports
200-52CV	Stainless Steel Check Valve with 1/4" MNPT Ports
501-131	Brass Solvent Check Valve with 1/4" MNPT x 1/8" FNPT Inlet
501-131SS	Stainless Steel Solvent Check Valve with 1/4" MNPT x 1/8" FNPT Inlet



### Adapter

The **160 Series** Nozzles can be connected to some existing manifolds or valves with the following pipe adapters:

PART NO.	DESCRIPTION
170-32A	CS Adapter with 1/4" Male NPT Inlet
170-33A	CS Adapter with 3/8" Male NPT Inlet
170-34A	CS Adapter with 1/2" Male NPT Inlet
170-36A	CS Adapter with 3/4" Male NPT Inlet
170-31A	CS Adapter with 11/16" x 16 Female NPT Inlet (For Venus Gun)



### Luer Lock Fitting

In order to attach a needle, a male Luer lock is offered on the **160 Series** mixers. When ordering, simply add the suffix "LL" to the mixer part number (e.g. 160-818LL). If you want to use a metal jacket with the 160-4XX and 160-6XX mixers then you need to order the mixer and the Luer lock fitting as two separate items unassembled. Please consult factory for details.



### Support Washers

For added strength, a support washer can be added to the **160 Series** Mixers. With high pressure drops (greater than 250 psi), the washer supports the mixers and prevents crushing. When ordering, add the suffix “W” to the mixer part number.



### Luer Needles

Two types of Luer needles are available. The standard needles have stainless tubing\* with burr-free blunt ends and plastic hubs. The tapered needles are a one-piece, plastic molded part. The needles are color-coded and pre-packaged, 50 needles per bag.

PART NO.	COLOR	DESCRIPTION
205-14-1/2	White	0.063" (1.6 mm) Dia outlet orifice - Standard
205-14-TT	Clear	0.063" (1.6 mm) Dia outlet orifice - Tapered
205-16-1/2	Purple	0.047" (1.2 mm) Dia outlet orifice - Standard
205-16-TT	Grey	0.047" (1.2 mm) Dia outlet orifice - Tapered
205-18-1/2	Pink	0.033" (0.8 mm) Dia outlet orifice - Standard
205-18-TT	Green	0.033" (0.8 mm) Dia outlet orifice - Tapered
205-20-1/2	Yellow	0.023" (0.6 mm) Dia outlet orifice - Standard
205-TK		Test Kit - Assortment 30 Needles

\* All standard needles consist of a 1/2" (12 mm) long SS tube shaft



### Bell Inlet

**Non-TAH Manifolds and Cartridges** - TAH offers the best quality and lowest cost mixing nozzles, replacing more expensive competitive mixers is **AS EASY AS 1, 2, 3 . . .**

**1. Bell Detail** - Some competitive mixing nozzles have a smaller inlet bell. TAH offers plastic sleeves which press fit into the standard 160 Series bell to convert our mixers to their size. Order Part No. 160-SLV.

**2. Retaining Nut** - The mixing nozzle is held onto the manifold with a retaining nut. All TAH manifolds and adapters have a 7/8 – 14 thread. Some competitors have a 7/8 – 9 thread. TAH offers plastic and aluminum nuts to fit their equipment. Consult Factory.

**3. Jacket** - Metal jackets are recommended if the working pressure inside the nozzle exceeds 150 psi. The jacket must fit the mixing nozzle snugly. Usually competitive jackets do not fit TAH mixing nozzles, therefore TAH offers a complete selection of low cost one-piece jackets. See page 12 for details.



The **230 Series** Multi-Core Mixers are designed for high-pressure meter/mix applications with messy adhesives. Consider these advantages:

- **EASY TO CLEAN**
- **COMPACT**
- **ECONOMICAL**

Even if a multi-core mixer is completely potted with cured resin, it can be disassembled. The elements can always be pushed out of the “non-stick” Polyplas™ body.

**DESCRIPTION:** The mixing path is serpentine. There are three mixing stages. Each stage has eight or twelve elements and they are connected with U-bends. The end cap and body are held together with three socket head cap screws.

Since the elements are supported in three places within the mixer, the maximum allowable pressure drop is over 1,000 psi. Refer to 120 Series for replacement elements.

### SPECIFICATION:

**Elements:** Polyplas™

**Housing:** Body: Polyplas™, Aluminum or 303 Stainless Steel

Gasket: Viton or EPDM

End Caps: Aluminum or 303 Stainless Steel

The models indicated below are popular. However, several options are available from stock. For example:

**Different Inlet and Outlet** – Each size is available with 1/8", 1/4", 3/8" or 1/2" female NPT.

**Different Materials** – 303 Stainless Steel End Caps and Bodies

PART NO.	ELEMENT			HOUSING					
	Diameter		Mixing Elements	Length		Inlet End FNPT	Outlet End FNPT	Pressure Limitation	
	inch	mm		inch	cm			psi @ 75°F	bar @ 23°C
230-124P-32A-V	.248	6.30	24	4.40	11.18	3/8"	1/4"	1360	94
230-124A-32A-V	.248	6.30	24	4.40	11.18	3/8"	1/4"	3760	259
230-136P-32A-V	.248	6.30	36	5.40	13.72	3/8"	1/4"	1360	94
230-136A-32A-V	.248	6.30	36	5.40	13.72	3/8"	1/4"	3760	259
230-224P-43A-V	.366	9.30	24	5.20	13.21	1/2"	3/8"	1200	83
230-224A-43A-V	.366	9.30	24	5.20	13.21	1/2"	3/8"	3300	228
230-236P-43A-V	.366	9.30	36	6.50	16.51	1/2"	3/8"	1200	83
230-236A-43A-V	.366	9.30	36	6.50	16.51	1/2"	3/8"	3300	228
230-324P-43A-V	.497	12.62	24	6.00	15.24	1/2"	3/8"	1200	83
230-324A-43A-V	.497	12.62	24	6.00	15.24	1/2"	3/8"	3300	228
230-336P-43A-V	.497	12.62	36	7.75	19.69	1/2"	3/8"	1200	83
230-336A-43A-V	.497	12.62	36	7.75	19.69	1/2"	3/8"	3300	228

## Other TAH Products and Catalogs Available

### TAH Plus™ Cartridge System

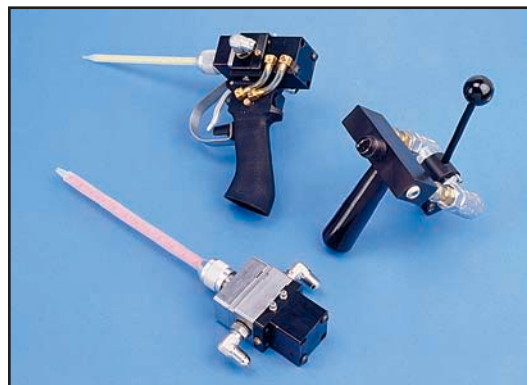
The ever-expanding TAH Plus™ Cartridge System offers a number of innovative choices. For our 50 ml cartridge line, you can choose from our new closed ended bayonet connection (no cap/plug required), standard open ended bayonet connection and our original Twist Lok™ design. These cartridges conveniently fit in standard manual and pneumatic dispensers, as well as our patented caulking gun conversion kit. Available in 1:1, 2:1, 4:1 and 10:1 ratios with an assortment of mixers.



### Dispensing Valves

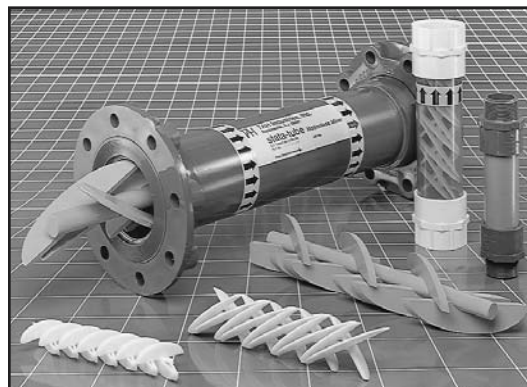
When used with metering equipment, these valves are ideal for solventless systems. The resin and hardener are separately ported through the valve body. The fluids do not meet until they are inside the disposable mixing nozzle.

**Three models are available:** pneumatic 400 Autovalve for high flow, pneumatic 450 Autovalve featuring snuff back for low flow and the 550 LP valve is economically priced for manual use.



### CPI Mixers

TAH Industries also offers a complete line of process mixers (Stata-tube™ and Spiral™) for the Petroleum, Chemical and Waste Water Treatment Industries. Typical applications include inline blending for pH control, gas-liquid contacting and extraction. Process mixers are available in diameters ranging from 1/8" to 30" and materials of construction include PVC, Kynar and stainless steel. Mixers for plastics processing and heat exchange are also available. Consult factory for details.



TAH Plus™ is a trademark of TAH Industries, Inc. Manufactured under U.S. Patent Number 5,535,922.

Stata-tube™ is a trademark of TAH Industries, Inc. Manufactured under U.S. Patent Number 4,093,188.

Spiral Mixer™ is a trademark of TAH Industries, Inc. Manufactured under U.S. Patent Numbers 4,840,493 and 4,850,705. Other U.S. and foreign patents pending.

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