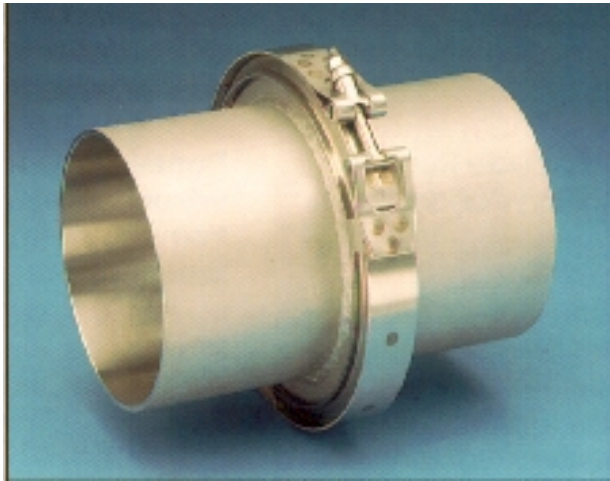




Self-Aligning Flange Sets

AN EASIER WAY TO KEEP YOUR PRODUCT PURE



The Young Industries "Self-aligning flange set" is a precision machined and unique pipe coupling system. This design helps you maintain high product quality by eliminating degradation of your product, providing a positive seal against leakage, easily assembles and disassembles for cleaning. It is called a Self-Aligning Flange (SAF) set because the patented design consists of a piloted male stub end that mates with a close tolerance counter bore female stub end that virtually eliminates eccentricity in the interior of the line. The design is complete with an O-ring seal that provides a positive seal against leakage. The interior has a smooth continuous internal surface for liquid or dry material handling. It helps reduce production down time and maintenance cost caused by the deterioration of the line when handling abrasive products.

UNIQUE JOINT DESIGN ASSURES LONG LEAK FREE SERVICE

The "O" ring pressure-responsive gasket design has been the heart of the SAF system since its inception. An O-ring is considered such an elegantly simple, reliable, and cost-effective sealing solution for a number of rea-

sions including - capable of bi-directional sealing, capable of compensating for tolerance run out, reusable within limits and resilient thus eliminating re-tighten of bolts. O-rings do not require any special installation tools or primers

O-rings project a small sealing footprint which enhances sealing properties. The symmetry of the O-ring's circular cross-section allows for sealing in any direction (radially, axially, or angularly) Also, O-ring's are made of a varied number of compounds that can resist virtually all aggressive chemicals and environmental application.

Unique seal design eliminates any contamination of your product by the seal material. The O-ring is full encased to prevent any exposure of the seal material to your product. The piloted male stub end and the counter bore female stub end surround, reinforce, and slightly compresses the O-ring seal. The design also eliminates the protrusion of the gasket into the pipe line to cause a leak or restrict material flow. The "O" ring is always secured making it easy to disassemble and reassemble.

SELF-ALIGNING FLANGE'S V-RETAINER COUPLING OFFERS QUICK ACCESS TO PIPING SYSTEMS.

The standard SAF uses an over-center latch style V-Retainer coupling to join the flange sets. The V-Retainer coupling exerts a uniform compressive force against the stub flanges. The over-center latch style reduces time when you need to removal sections of



Self-Aligning Flange sets are furnished with two stub ends for welding to the process pipe, an O-ring seal and a V-Retainer coupling. The flange ends are machined so the one end insert into the other end forming perfect alignment with a continuous internal surface on the inside of the line. The result is a smooth connection capable of withstanding piping system loads

the piping system for clean-out or maintenance. The over-center handle does not require tools to open or close the coupling once you make initial adjustment. A nut provides adjustable tension. The self-energizing latch and retainer reduces accidental opening of the coupling. Note: any internal pressure must be released before opening the coupling.

Although the SAF couplings form a permanent pipe connection, they easily disassemble for maintaining, cleaning or retrofitting a piping system. Since each joint is a union, simply loosening the coupling permits a damaged piece of pipe to be removed, an elbow to be replaced by a tee to extend a system, or a valve, strainer or other component to be installed later. Fittings can be assembled loosely and rotated to line up with mating components before tightening. This simplifies working in tight spaces around existing piping structures, or equipment.

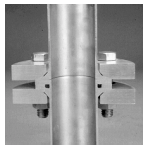
Selecting Couplings

Engineers faced with building a piping systems know a coupling must meet one or more of the following requirements:

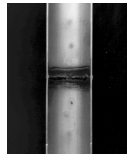
- A: Is easy to install, remove and reuse
- B: Guarantees contact of the two pipe ends
- C: Prevents pipe sections from moving apart
- D: Keeps the pipe sections aligned
- E: Guarantees electrical conductivity
- F: Is airtight

Commercial couplings are available in several types and each fulfill specific requirements. The Self-Aligning Flange coupling will meet all of the above requirements.

The SAF connector design is easy to install. It features a captured O-ring seal that is out of the product contact area and is airtight. The flange or clamp provides positive clamping action to resist flexural and torsional loads. It conforms to the support and hanging requirements. As the stub end flanges are drawn together by the clamp assembly, the O-ring seals without full compression when the stub end makes metal to metal contact.

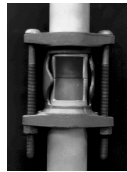


The following information describes other common coupling types:



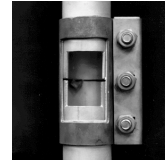
Welded pipe - Welding pipe sections together is a common coupling procedure. During installation, you must weld carefully to prevent weld drips or splatters from forming inside the pipe. Clean up

is almost impossible with a 20' section of pipe.



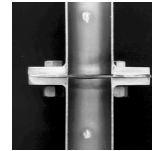
Gasket and sleeve - This coupling includes a sleeve that's installed over the pipe ends and two gaskets with triangular cross-sections that are inserted between the sleeve edges and the pipe to seal the coupling. The sleeve ends

are bolted together, forcing the gasket tightly between the sleeve and the pipe wall. During installation you are never sure the pipe ends contact each other and that the coupling is centered on the joint. Internal Alignment is not guaranteed.



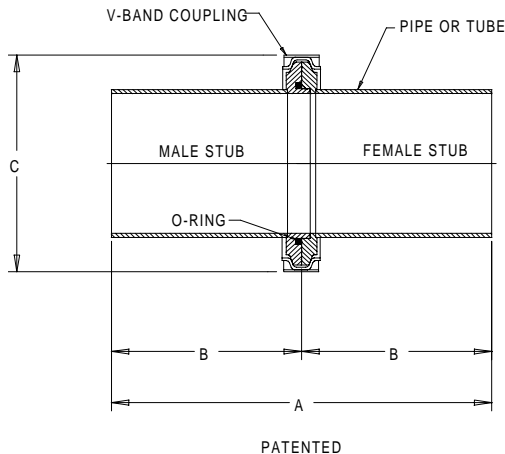
Pinch clamps - Available in several types, typically containing a gasket that wraps around the pipe joint. A shell is then clamped around the gasket with bolts or toggle

clamps. During installation, you are never sure that the clamp is centered on the joint, and the gasket is straight and that the gasket ends don't overlap each other. Internal alignment is also not assured.



Flanged pipe - To form a flanged pipe coupling, a flange is screwed or welded on each of the pipe ends. To install the coupling you must carefully align the two pipe sections.

Standard flange bolts and bolt holes permit as much as 1/8" inch misalignment. If you use gaskets to seal the coupling, many times the gasket material intrudes inside the pipe and the pipe is not electrically conductive.



NOM. SIZE	A	B	C
2"	8.00"	4.00"	4.03"
3"	8.00"	4.00"	5.41"
4"	10.00"	5.00"	6.60"
5"	10.00"	5.00"	7.73"
6"	10.00"	5.00"	8.91"
8"	10.00"	5.00"	11.03"
10"	10.00"	5.00"	13.17"
12"	10.00"	5.00"	15.41"

Standard sizes - Custom designs are available

DIMENSIONS - SELF-ALIGNING FLANGE SET WITH V-RETAINER COUPLING

The Young Industries patented Self-Aligning Flange sets are offered in a large selection of standard sizes. Available in 2", 3", 4", 5", 6", 8", 10" and 12" diameters in both tubing and pipe sizes. The sets are offered in carbon steel, aluminum, stainless steel and titanium and other non standard materials of construction. All the V-Retaining couplings are constructed with formed sections and band of 304 stainless steel, with the bolt con-

structed of 431 stainless steel and with 347 stainless steel self locking nut.

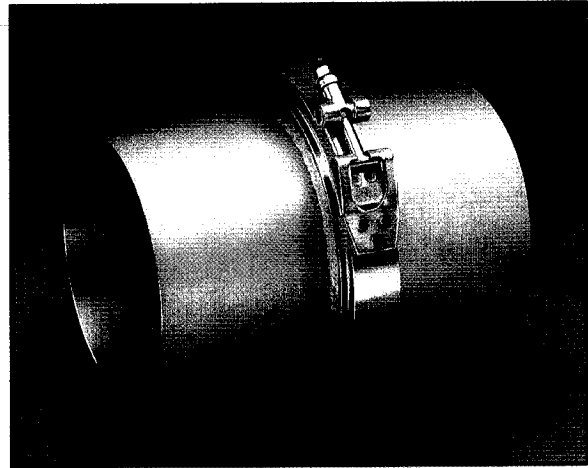
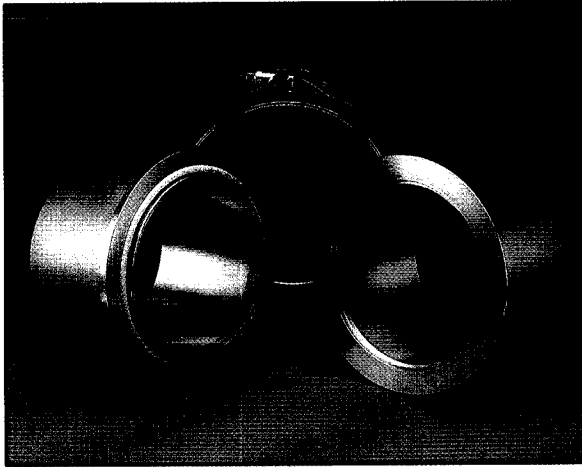
The standard Self-Aligning Flange sets offered include:

1. Style LP - 15 PSIG working pressure low pressure with over center latch V-retainer
2. Style MP - 50 PSIG working pressure medium pressure with T-handle V-retainer.

3. Style HP - 150 PSIG working pressure with high pressure lap flanges, full penetration welds

The Self-Aligning Flange sets can be furnished in several design variations. We offer technical services to assist you on special applications. Contact us for current pricing and delivery or in you have any questions.

No Leaks! No Gasket Exposure!



patented

***Establish your
leak free system
by installing
Young Industries'
Self-Aligning
Flanges with
V-retainer
couplings.***

- Unique design eliminates any gasket exposure to the product creating a smooth, continuous surface.
- Available in 2", 3", 4", 5", 6", 8", and 10" diameters in both tubing and pipe sizes.
- Easily field welded into place.
- Flange sets are manufactured in carbon steel, aluminum, stainless steel or special alloys.
- Disassembles and reassembles for inspection, cleaning or maintenance.

**THE
Young®
INDUSTRIES, INC.**

P.O. Box 30 ■ MUNCY, PA 17756-0030
570-546-3165 ■ FAX: 570-546-1888
e-mail: youngi@pennet.net

PRODUCT SUMMARY

Horizontal Mixers, available in 115 basic sizes from 1/2 cu. ft. to 1500 cu. ft.

Twin Shaft Continuous Mixer, 4" dia. to 36" dia. twin agitators with adjustable paddles.

Multi-Port® Gravity Blender for process variation and additive blending.

Single and Double Runner **Attrition Mills** in standard sizes 13" to 36".

Self-Aligning Pipe or Tube Flange Sets provide smooth continuous internal surface for liquid or dry material handling. Low pressure or high pressure models for either pipe or tubing.

Multi-Phase Pneumatic Conveyor, low velocity, low turbulence dense phase pneumatic conveying systems.

TransVair® Product Pump conveys up to 6,000 pounds of product per hour. Adjustable conveying velocities minimize air requirements (30 SCFM at 15 to 40 PSIG).

Rotary Sifters for dissipating soft agglomerates and retaining incidental materials. 1250 lbs./hr. to 13,000 lbs./hr. capacity.

Self-Contained Filter Bag Dump Station is designed to provide maximum dust control for all powdered materials, without

external ducting, auxiliary fans or filters.

Multi-Flow Bulk Bag Unloading Frame uses a hoist to lift and position bulk bags safely and dependably.

Bag Compactor controls dust and handles empty bags at your dumping station.

TransVair® Mechanical Conveyor handles materials ranging from sub micron to 1/2" particle size, at any angle with distances up to 100 ft. and capacities up to 1,000 cu. ft./hr. Available in right angle and "Z" configurations.

Uni-Cage® Product Receivers, cylindrical housings, automatic pulse jet cleaning standard.

Uni-Cage® Bin Vent Filters, modular horizontal and vertical cylindrical designs.

TransVair® Cyclone Collectors for mechanical separation of products. 115 to 15,000 CFM capacity, vacuum or high pressure.

Inline Filters for use in negative pressure pneumatic conveying systems.

TransVair® Pneumatic Conveying Systems. Positive, negative, combination positive/negative pressure systems for handling dry bulk solid materials.

Rotary Valves (drop-thru design) in standard sizes from .003 to 8.7 cu. ft/rev. with square or round flanges for sizes 1" to 24".

Side Entry Rotary Valves standard sizes 4" to 24". Designed for 15 PSIG operation.

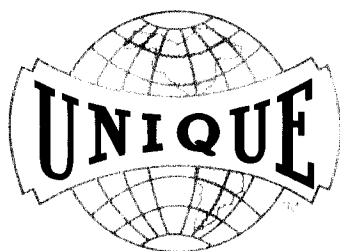
Class 150 and 300 **Drop-Thru Rotary Valves** for high temperature applications to 1500 F/815 C at 15 PSIG or high internal pressures up to 350 PSIG at ambient temperatures. Sizes from 4" to 24" in HC and LH models.

Cantilevered Drop-Thru Rotary Valves designed for disassembly at one end without tools or removal from the line. Available in standard sizes of 4" through 18".

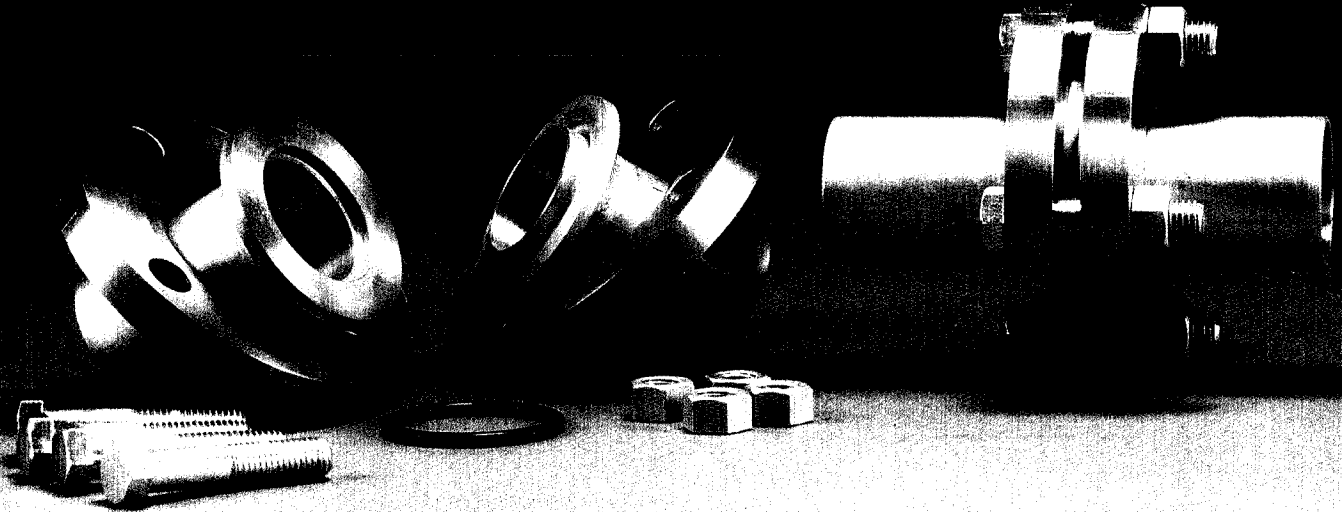
Diverter Valves designed for 15 PSIG positive or negative pressure. Eccentric "Y", true "Y" Swing Gate Valves and Rotary Diverter Valves furnished 2" to 18".

TransVair® Power Packages (positive pressure and negative pressure) use positive displacement blowers, sized for each application.

Centrifugal Blowers, 32 sizes with static pressure capabilities up to 75" WG and volumes up to 2,700 CFM.



ELIMINATE PRODUCT DEGRADATION



Install Young Industries' Self-Aligning Pipe or Tube Flange Set

- Low pressure models to 15 PSIG in aluminum, carbon steel construction - pipe or tubing.
- High pressure models 15 to 150 PSIG in carbon steel or stainless steel construction - pipe only.
- Self-aligning flanges.
- Fully protected O ring seals.
- Easily welded into place.
- Ease of disassembly and reassembly for inspection, cleaning or maintenance.
- Smooth continuous internal surface for liquid or dry material handling.

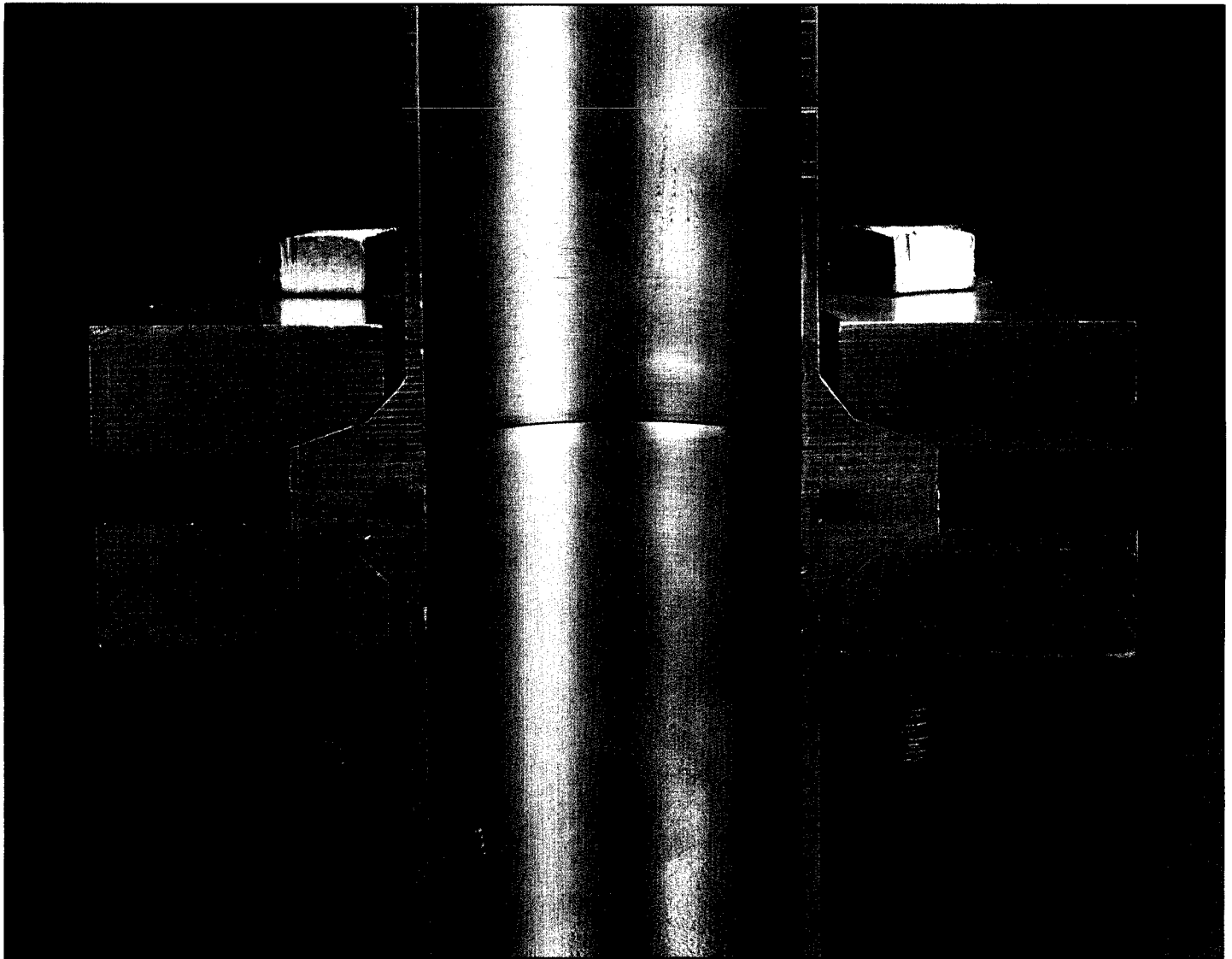
Self-alignment eliminates product degradation

**THE
Young®**

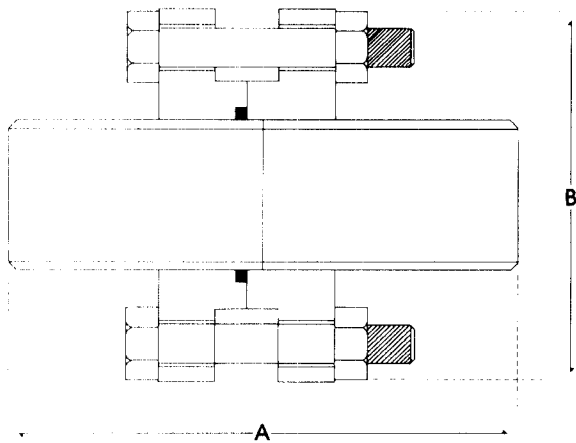
INDUSTRIES, INC.

P.O. BOX 30 ■ MUNCY, PA 17756-0030

PH: 570-546-3165 ■ FACSIMILE: 570-546-1888



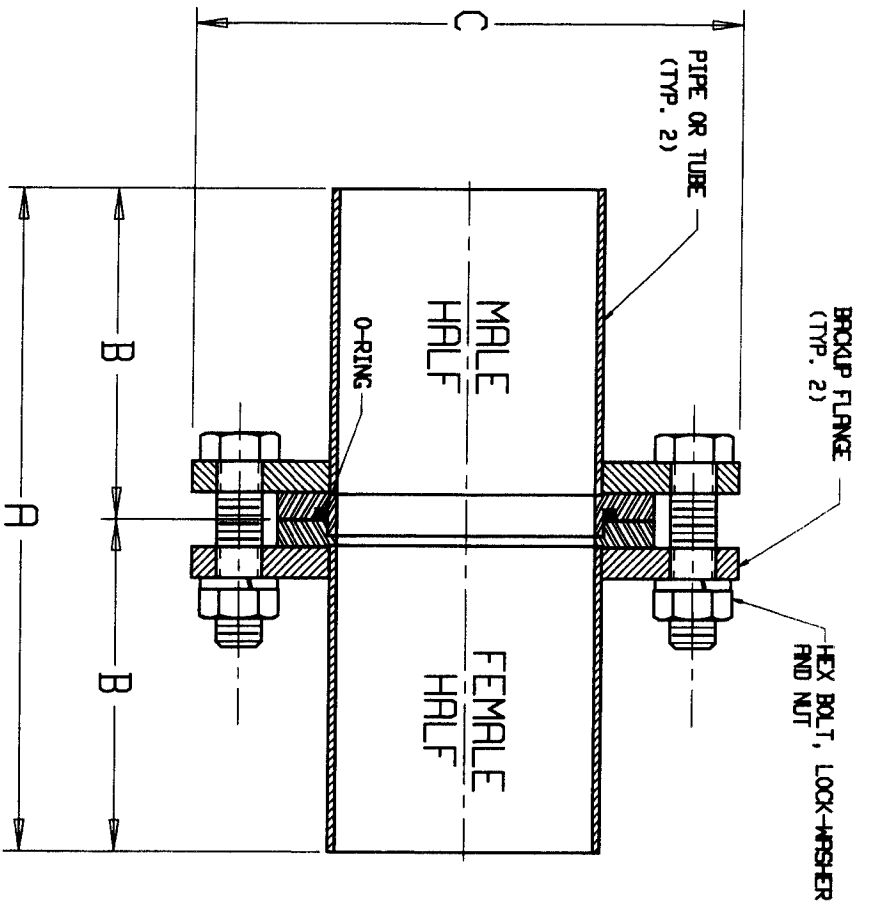
A cut-away view shows the precise fit of the Young Industries' patented flange set.



SIZE	A	B
1.5	8.0	5.0
2.0	8.0	6.0
2.5	8.0	7.0
3.0	8.0	7.5
4.0	10.0	9.0
5.0	10.0	10.0
6.0	10.0	11.0
8.0	10.0	13.5

Larger flange sets are available to meet your specifications.


THE Young®
 INDUSTRIES, INC.
 P.O. BOX 30 ■ MUNCY, PA 17756-0030
 PH: 570-546-3165 ■ FACSIMILE: 570-546-1888



PATENTED

- NOTES:
1. MATERIALS AND QUANTITIES PER ORDER
 2. WELDING, GRINDING, AND CLEAN-UP PER ORDER
 3. DESIGN CONDITIONS:
- PRESSURE: 500 P.S.I.G. MAX.
TEMPERATURE: 200 DEG. F

NOM. SIZE	A	B	C	BOLT SIZE
2.0"	8.0"	4.0"	6.0"	5/8"
3.0"	8.0"	4.0"	7.5"	5/8"
4.0"	10.0"	5.0"	9.0"	5/8"
5.0"	10.0"	5.0"	10.0"	3/4"
6.0"	10.0"	5.0"	11.0"	3/4"
8.0"	10.0"	5.0"	13.5"	3/4"
10.0"	10.0"	5.0"	16.0"	7/8"
12.0"	10.0"	5.0"	19.0"	7/8"

GENERAL TOLERANCES	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
FINISHING - .004" ± .002	.004" ± .005
SURFACE ROUGHNESS HEIGHT 63 MICRONS OR LESS	
FIBERGLASS - LINER 6 ± .06	6 TO 24 24 TO 60 OVER 60
	4.12 4.19 5.25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
PRINT ISSUE DATE	CRD FILE NUMBER: /mtp/data/ 331/2 2882 13 & 13*

REV. NO.	DESCRIPTION	DATE	BY
3			
2			
1			

REVISIONS

CUSTOMER

CUST. NO.

YOUR ORDER NO.

TITLE

STANDARD ASSEMBLY FOR SELF-ALIGNING FLANGE SETS WITH BROCK-UP FLANGES.

THE YOUNG INDUSTRIES, INC.
HAWT, PENNSYLVANIA 17795
TELEPHONE: 717-546-3181

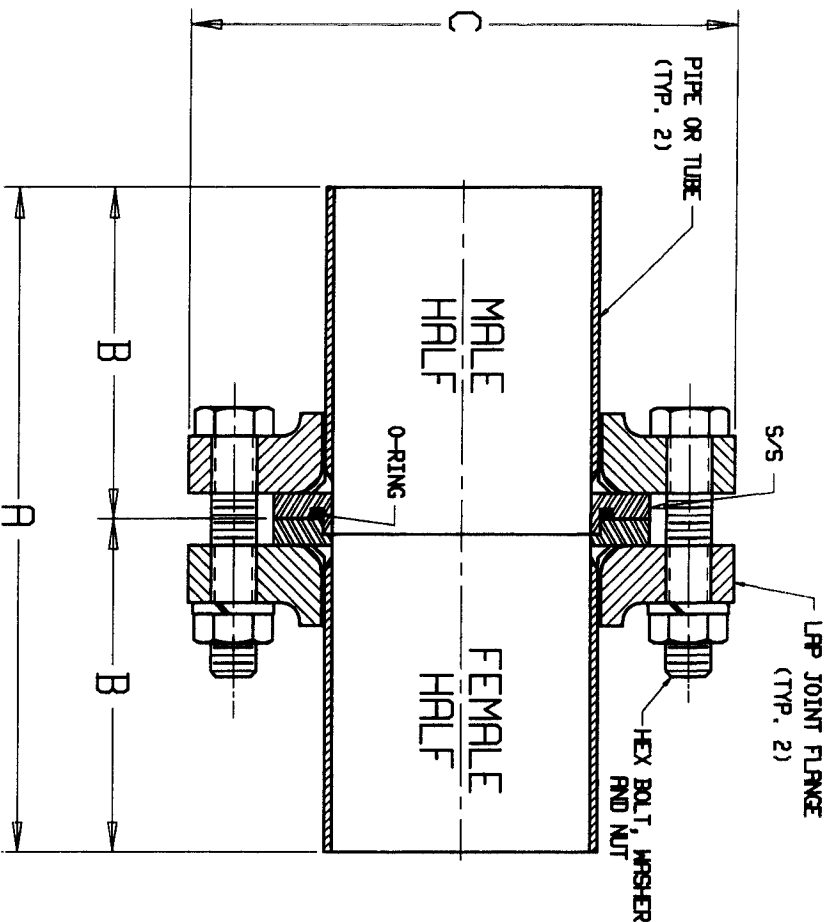
DRAWN BY: M F M

CHECKED BY:

SCALE: N/A

DATE: 3/14/96

DRAWING NUMBER: 2-7809-13.00



PATENTED

NOTES:
 1. DESIGN CONDITIONS:
 PRESSURE: 150 PSIG MAX.
 TEMPERATURE: 200 DEG. F

NOM. SIZE	A	B	C	BOLT SIZE
2.0"	8.0"	4.0"	6.0"	5/8"
3.0"	8.0"	4.0"	7.5"	5/8"
4.0"	10.0"	5.0"	9.0"	5/8"
5.0"	10.0"	5.0"	10.0"	3/4"
6.0"	10.0"	5.0"	11.0"	3/4"
8.0"	10.0"	5.0"	13.5"	3/4"
10.0"	10.0"	5.0"	16.0"	7/8"
12.0"	10.0"	5.0"	19.0"	7/8"

GENERAL TOLERANCES	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
MACHINING - .004 ± .002 .000 ± .005 FIN LE ± .50"	
SURFACE ROUGHNESS HEIGHT 63 MICRONS OR LESS	
FERRITATION - LINER 6 6 TO 24 24 TO 60 OVER 60	
±.06 ±.12 ±.19 ±.25	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
PRINT ISSUE DATE	ORD FILE NUMBER: /mfp/date/ 391

REV. NO.	DESCRIPTION	DATE	BY
1			
2			
3			

REVISIONS

CUSTOMER _____

CLST. NO. _____

YOUR ORDER NO. _____

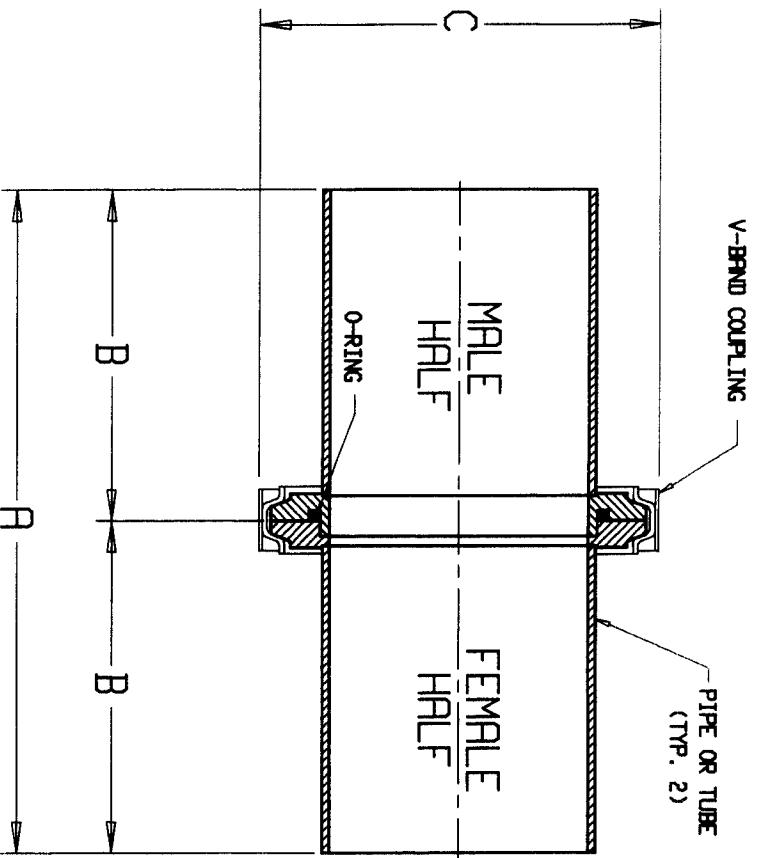
TITLE
**STRANDRO RESERVLY FOR SELF-ALIGNING
 FLANGE SETS WITH LPP FLANGES.**
 (150 P.S.I.G.)

INDUSTRIES, INC.
 1775
 TELPHONE: 717-946-3185

DRAWN BY: M F M
 CHECKED BY: _____
 DATE: 6/12/96

SCALE: N/A

DRAWING NUMBER: **2-7809-14.00**



PATENTED

- NOTES:
1. MATERIAL OF CONSTRUCTION AND QUANTITIES PER ORDER.
 2. WELDING, GRINDING, AND CLEAN-UP PER ORDER.
 3. DESIGN CONDITIONS:
 PRESSURE: 15 PSIG MAX. (OVER CENTER LATCH)
 PRESSURE: 50 PSIG MAX. (*T HANDLE LATCH)
 TEMPERATURE: 200°F

NOM. SIZE	A	B	C
2.0"	8.0"	4.0"	4.03"
3.0"	8.0"	4.0"	5.41"
4.0"	10.0"	5.0"	6.60"
5.0"	10.0"	5.0"	7.73"
6.0"	10.0"	5.0"	8.91"
8.0"	10.0"	5.0"	11.03"
10.0"	10.0"	5.0"	13.17"
12.0"	10.0"	5.0"	15.41"

GENERAL TOLERANCES

UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
MACHINING - .004 ±.002 .006 ±.005 FINISH ±.001	
STARTING ROUGHNESS HEIGHT 63 MICROINCHES OR LESS	
FABRICATION - UNDER 6 6 TO 24 24 TO 80 OVER 80	±.05 ±.12 ±.19 ±.25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
PRINT ISSUE DATE	331/2 7809 15 & 15M

REV. NO.	DESCRIPTION	DATE	BY
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2			
3			

REVISIONS

CUSTOMER _____

QUST. NO. _____

YOUR ORDER NO. _____

TITLE _____

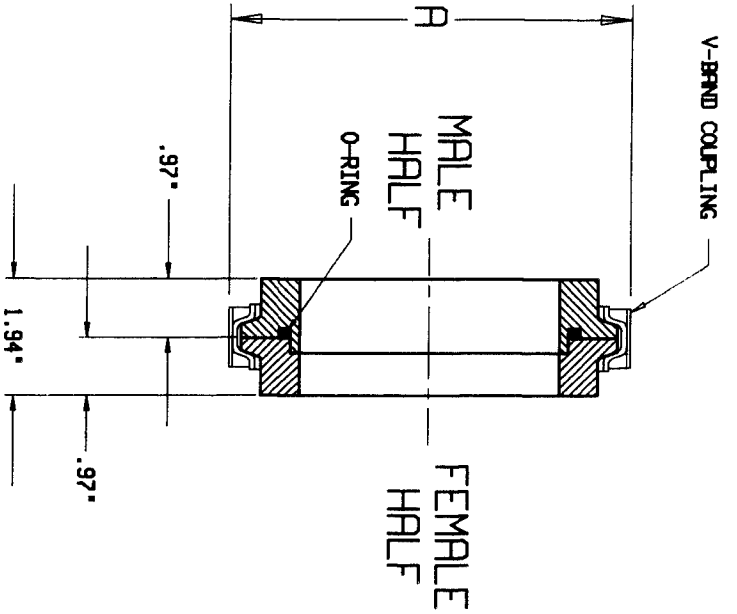
STD. ASSEMBLY FOR SELF-ALIGNING QUICK CONNECTION FLANGE SETS

THE YOUNG INDUSTRIES, INC.
 HUNTS, PENNSYLVANIA 17785
 TELEPHONE: 717-546-3165

DESIGN BY: M F W SCALE: NONE

CHECKED BY: _____ DATE: 3/14/96

DRAWING NUMBER: 2-7809-15.00



NOM. SIZE	A
2.0"	4.03"
3.0"	5.41"
4.0"	6.80"
5.0"	7.73"
6.0"	8.91"
8.0"	11.03"
10.0"	13.17"
12.0"	15.41"

PATENTED

NOTES:

1. MATERIAL OF CONSTRUCTION AND QUANTITIES PER ORDER.
2. DESIGN CONDITIONS:
 PRESSURE: 15 PSIG MAX. (OVER CENTER LATCH)
 PRESSURE: 50 PSIG MAX. ("T" HANDLE LATCH)
 TEMPERATURE: 200°F

GENERAL TOLERANCES	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
HITCHING - .004 ± .002	.004 ± .005
SLANT ROUNDER HEIGHT	63 MICRONS OR LESS
FIBERGLASS - UNDER 6	5 TO 24
	24 TO 50
	OVER 50
	±.06
	±.12
	±.19
	±.25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
PRINT ISSUE DATE	CRD FILE NUMBER: /md180/dkt*/
	331/2/7809_16 & 16m

REV. NO.	DESCRIPTION	DATE	BY
1			
2			
3			

REVISIONS

CUSTOMER _____

CLST. NO. _____

YOUR ORDER NO. _____

TITLE _____

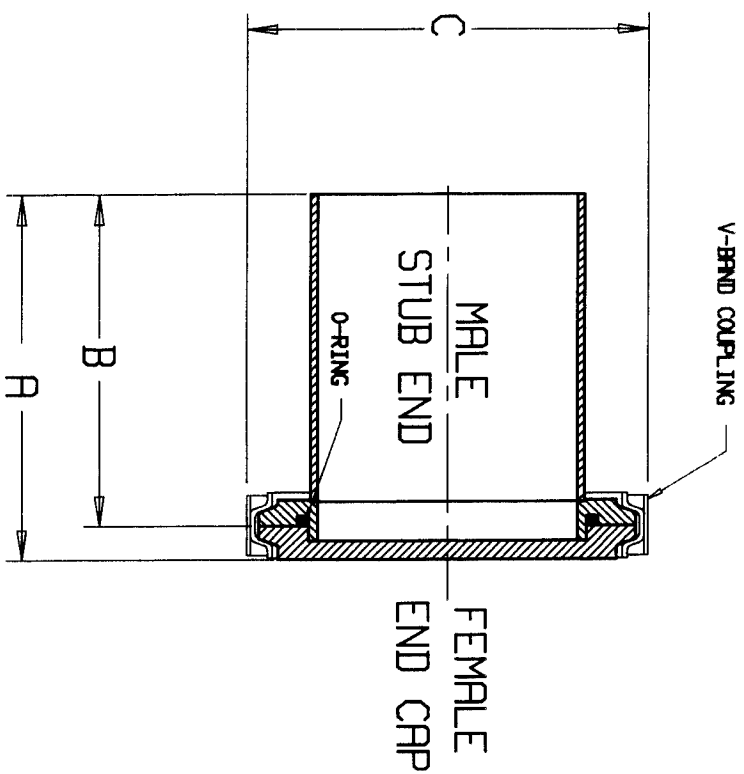
STD. ASSEMBLY FOR QUICK CONNECTION
RODAPTER RING SETS

THE
YOUNG
INDUSTRIES, INC.
MONT. PENNSYLVANIA 17725
717-546-3185

DESIGNED BY M F M SCALE NONE

CHECKED BY DATE 6/27/96

DRAWING NUMBER 2-7809-16.00



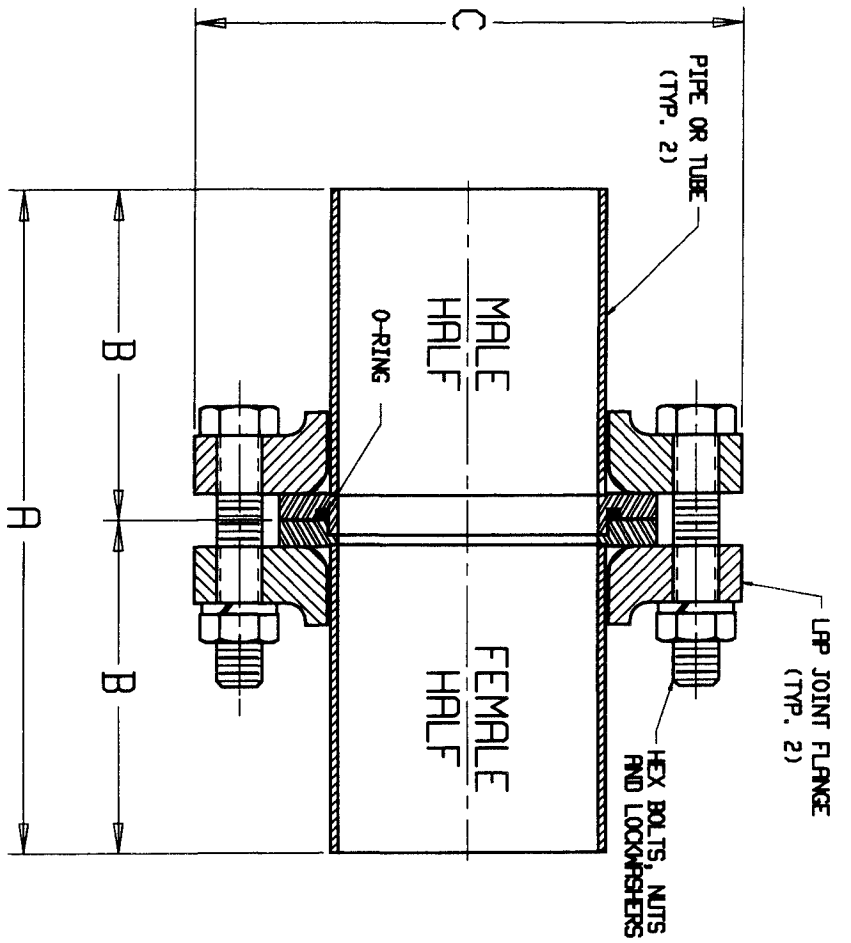
NOM. SIZE	A	B	C
2.0"	4.56"	4.0"	4.83"
3.0"	4.56"	4.0"	5.41"
4.0"	5.56"	5.0"	6.60"
5.0"	5.56"	5.0"	7.73"
6.0"	5.56"	5.0"	8.91"
8.0"	5.56"	5.0"	11.03"
10.0"	5.56"	5.0"	13.17"
12.0"	5.56"	5.0"	15.41"

- NOTES:
1. MATERIAL OF CONSTRUCTION AND QUANTITIES PER ORDER.
 2. WELDING, GRINDING, AND CLEAN-UP PER ORDER.
 3. DESIGN CONDITIONS:
 PRESSURE: 15 PSIG MAX. (OVER CENTER LATCH)
 PRESSURE: 50 PSIG MAX. (1" HANDLE LATCH)
 TEMPERATURE: 200°F

PATENTED

GENERAL TOLERANCES	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
FINISHING - .004 ± .002	.000 ± .005
SURFACE ROUGHNESS HEIGHT 63 MICRONS OR LESS	
FABRICATION - UNDER 6	6 TO 24
±.06	±.12
	24 TO 60
	OVER 60
	±.25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
PRINT ISSUE DATE	ORD FILE NUMBER: 742180/4414/
	331/2 7809 17 & 17m

<p>3</p>			
<p>2</p>			
<p>1</p>			
REV. NO.	DESCRIPTION	DATE	BY
REVISIONS			
CUSTOMER			
CUST. NO.			
YOUR ORDER NO.			
TITLE			
<p>STD. ASSEMBLY FOR QUICK CONNECTION END CAP</p>			
<p>INDUSTRIES, INC. MKT. RESEARCH 717-546-3185</p>		<p>DRAWN BY: M F M</p> <p>CHECKED BY: M F M</p> <p>SCALE: NONE</p> <p>DATE: 8/13/96</p>	
<p>DRAWING NUMBER</p>		<p>2-7809-17.00</p>	



- NOTES:**
1. WELDING, GRINDING, AND CLEAN-UP PER V.1. ENGINEERING SPECIFICATION 185.200 RS FOLLOWS:
 WELDING _____ CLASS I
 GRINDING, INTERIOR _____ NONE
 GRINDING, EXTERIOR _____ CLASS II
 CLEAN-UP _____ CLASS II
 2. DESIGN CONDITIONS:
 PRESSURE: 50 PSIG MAX.
 TEMPERATURE: 200 DEG. F

NOM. SIZE	A	B	C	BOLT SIZE
2.0"	8.0"	4.0"	6.0"	5/8"
3.0"	8.0"	4.0"	7.5"	5/8"
4.0"	10.0"	5.0"	9.0"	5/8"
5.0"	10.0"	5.0"	10.0"	3/4"
6.0"	10.0"	5.0"	11.0"	3/4"
8.0"	10.0"	5.0"	13.5"	3/4"
10.0"	10.0"	5.0"	16.0"	7/8"
12.0"	10.0"	5.0"	19.0"	7/8"

GENERAL TOLERANCES	
UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY	
MACHINING - .004 ± .02	.004 ± .005
SURFACE ROUGHNESS HEIGHT 63 MICROINCHES OR LESS	ANGLE ± .50°
FABRICATION - UNDER 6	6 TO 24
	24 TO 60
	OVER 60
	±.05
	±.12
	±.19
	±.25
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
PRINT ISSUE DATE	ORD FILE NUMBER: /amp/date/ 331/

THE YOUNG INDUSTRIES, INC. 1775 MAIN, FENNELWOOD TELEPHONE: 717-946-3185																	
CUSTOMER _____ ORDER NO. _____ YOUNG ORDER NO. _____ TITLE _____ STANDARD ASSEMBLY FOR SELF-FLANGING FLANGE SETS WITH LAP JOINT FLANGES. (LOW PRESSURE DESIGN)	DRAWN BY: M F W CHECKED BY: _____ DATE: 8/15/96 SCALE: N/A																
REVISIONS <table border="1"> <thead> <tr> <th>REV. NO.</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td></td> <td></td> </tr> <tr> <td>2</td> <td></td> <td></td> <td></td> </tr> <tr> <td>3</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	REV. NO.	DESCRIPTION	DATE	BY	1				2				3				DRAWING NUMBER: 2-7809-18.00
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SELF-ALIGNING FLANGE SETS *PRODUCT DESCRIPTION*

The Young Industries self-aligning flange set is a precision machine and unique pipe coupling. It is called a self-aligning flange set because the patented design consists of a piloted (male) stub end which mates with a close tolerance counterbore (female) stub end which virtually eliminates eccentricity.

The stub end design reduces the number of loose parts and requires only one simple field weld to the end of the pipe for each stub end. It features a captured o-ring seal which is out of the product contact area and provides quick access to the convey line with a stainless steel v-retainer clamp.

The Young Industries self-aligning flange set has many benefits over grooved and/or ring type couplings. In addition to guaranteeing internal alignment as opposed to external alignment, the self-aligning flange set eliminates any gap between pipes being joined together. Therefore, product cannot build up in this area. The captured o-ring not only seals the convey line but requires no handling like other types of couplings require and results in less time needed for assembly or disassembly. Less field welding and less critical weld clean up is required to install the self-aligning flanges compared to other couplings as well. Another unique feature of the self-aligning flange set is the stainless steel v-retainer clamp. The v-retainer clamp makes access easy and quick because it requires no tools. Once your Young Industries self-aligning flange set is welded to your convey line, you have a durable, clean and easily accessed pipe joint with convey line alignment.

The quick access v-retainer clamp is our standard recommendation for applications up to 50 PSIG. However, optional, bolted plate back-up type flanges can replace the v-retainer clamp on applications up to 50 PSIG. Bolted lap type flanges are also an option for any application up to 150 PSIG.

The self-aligning flange sets are available in stainless steel, carbon steel, aluminum or special alloys in both pipe and tube sizes. O-ring seals are out of the product contact area and are available in F.D.A. approved ingredients. Therefore, we do not recommend the use of o-rings that are white in color. Delivery times increase dramatically when white o-rings are ordered.

The self-aligning flange set also has several design variations. The standard design consists of a male and a female stub end. This application is primarily for connecting two convey lines. It is also available with a male or a female stub end and a blind end cap. This design provides a quick access clean out. In applications where alignment is not critical and quick access is desired, the v-retainer clamp and a pair of flat adapter rings may be purchased.

All of these features and benefits convert into overall cost savings to the customer and should be considered when comparing the self-aligning flanges to other types of couplings. Cut sheets and outline drawings showing overall dimensions are provided for your information.

Proper installation practices must be followed when installing convey lines. The minimum axial movement required to separate a male and a female self-aligning flange set is 3/8".

Self-Aligning Flange Sets Features & Benefits

I. ALIGNMENT

- A. Internal - Where the product is (vs. External like: Morris, Victaulic, Dresser).
- B. Machined - Closer tolerance than standard pipe or tube.
RESULT: ELIMINATES PRODUCT DEGRADATION!

II. ASSEMBLY

- A. Piloted - Provides a guided reassembly and a repeated alignment.
- B. Machined Ends - Allows only a minimal gap between the mating S.A.F. halves.
RESULT: LESS PRODUCT BUILD-UP!

III. SEAL

- A. Location - Out of the product contact area.
- B. Retention - Not a loose part.
RESULT: ELIMINATES CONTAMINATION AND SIMPLIFIES ASSEMBLY!

IV. INSTALLATION

- A. Design - Allows a controlled weld and clean-up process.
- B. Simplicity - Does not require special equipment.
RESULT: OVERALL LESS TIME AND COST TO INSTALL!

V. QUICK ACCESS

- A. Ease - No tools required to assemble.
- B. Time - Less time required when no bolts are used.
- C. Options - Over the corner latch or the AT® handle.
RESULT: LESS TIME AND COST TO DISASSEMBLE AND REASSEMBLE!

VI. VARIATIONS

- A. Design - Self-alignment, quick access only, end cap.
- B. Material - Stub ends: S/S, C/S, aluminum or special / o-rings: BUNA-N, Viton, silicone, white neoprene or special.
- C. Pressure - ≤ 50 PSIG & 150 PSIG.
- D. Applications - Pneumatic conveying, food grade, FDA approved ingredients or special.
RESULT: CAN BE ADAPTED TO A WIDE RANGE APPLICATIONS!

SELF-ALIGNING FLANGE SET USERS LIST (PARTIAL)

1. Amoco 4" & 10" Sch. 10, 304 S/S
2. Ciba-Geigy Corp. 2", 4", 5", 6" & 8" O.D. tube, 304 S/S, Q-Rel., 15 PSIG
10" & 12" Sch. 10, 304 S/S, Q-Rel., 15 PSIG
3. Cincinnati Specialty 2" Sch. 10, 316 S/S, Q-Rel., 15 PSIG
4. Dow Chemical 2" Sch. 10, 304 S/S, 150 PSIG
5. DuPont 4" Sch. 10, aluminum
2", 3" & 4" Sch. 10, 304 S/S
4" & 6" Sch. 10, 304 S/S, Q-Rel., 50 PSIG
6. Eval Company 3" Sch. 10, aluminum & 304 S/S
7. Fina Oil 6" O.D. tube, aluminum
8. G.E. 4", 5" & 6" Sch. 10, 304 S/S
5" Sch. 10, 304 S/S, 150 PSIG
9. Notch Welding 6" & 8" Sch. 10, aluminum & 304 S/S
10. P P & G 2" Sch. 40, C/S, Q-Rel., 15 PSIG
11. Stainless Tubular 3" Sch. 10, 304 S/S, 150 PSIG
12. Union Carbide 4" & 6" Sch. 10 aluminum
2", 3", 4" & 6" Sch. 10, 304 S/S
13. Wellman, Inc. 5", 6" & 8" Sch. 10 aluminum, 15 PSIG
6" & 8" Sch. 10, 304 S/S
14. Werner-Pfleiderer 6" O.D. tube, 304 S/S, Q-Rel., 15 PSIG