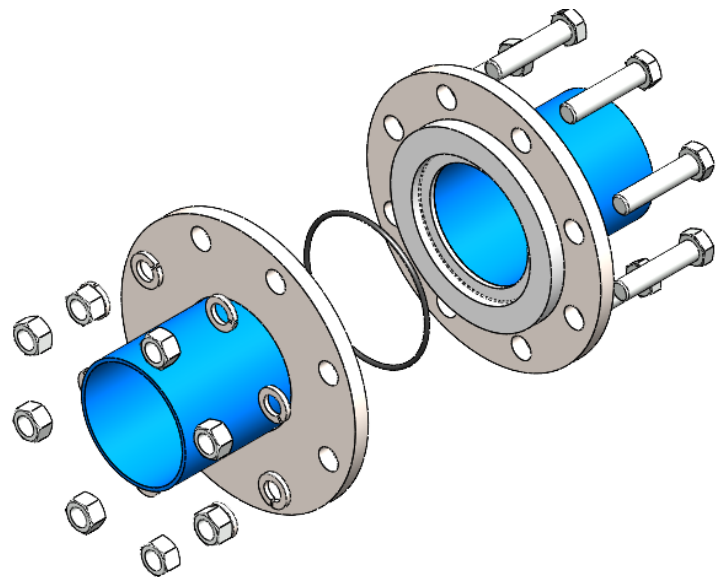
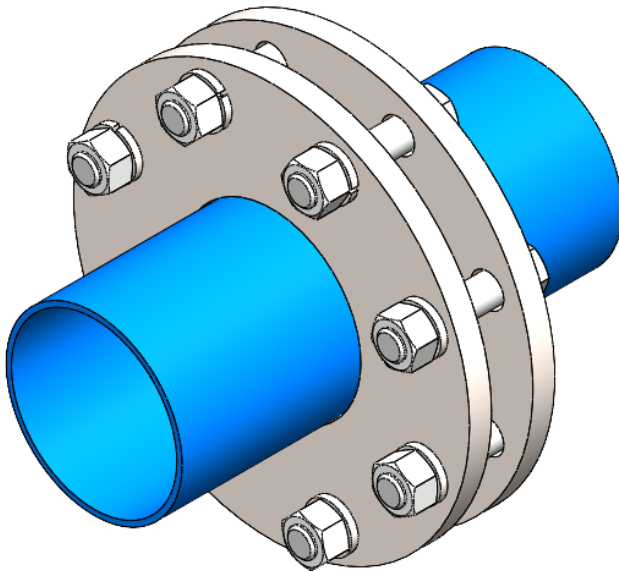


Self-Aligning Flanges

Installation, Operation, and Maintenance Manual



THE
Young®

INDUSTRIES, INC.
16 PAINTER STREET
MUNCY, PA 17756

FOREWORD

This manual contains instructions for installation, operation and maintenance of Young Industries Self-Aligning Flanges. The care taken during receiving, storage, installation and continued maintenance will add to the reliable operation and long service life of this equipment.

This manual should be read and understood in its entirety by the operator and the director of plant safety before performing any work on or operation of the flanges. Contact Young Industries for additional copies of this manual which may be required to ensure the flanges being operated safely and according to the recommended procedures included in this manual.

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SAFETY

READ AND FULLY UNDERSTAND THIS MANUAL BEFORE OPERATING OR PERFORMING ANY WORK ON YOUNG INDUSTRIES SELF-ALIGNING FLANGES.

If you have previously received delivery of Young Self-Aligning Flanges and are just now receiving this manual, please read this manual completely. Insist that both the Self-Aligning Flange installer and the director of plant safety read and fully understand this manual before continued use of and/or performing any maintenance on the Self-Aligning Flanges.

Notify Young Industries if your Self-Aligning Flange does not include any safety warning labels or devices recommended within this manual. Contact the Engineering Manager for assistance at (570) 546-3165 before continued use or maintenance.

Notify Young Industries if you have sold, leased, rented, or given any Young Self-Aligning Flanges to another user. Your assistance will allow Young Industries to contact the new user with updated safety and/or operational recommendations.

Safety is a fundamental factor that must be considered at all times. Use of proper tools and methods can prevent serious accidents that may result in injury to you and your fellow workers.

A number of safety precautions are listed throughout this manual. Study them carefully and follow them; insist that those working with you do the same. Remember: someone's carelessness or negligence can easily cause an accident.

The various precautions and recommendations detailed within this manual are not necessarily all-inclusive. Young Industries has attempted to provide SAFETY AND OPERATIONAL GUIDANCE relating to typical installations with which we are familiar. We urge you to review your particular Self-Aligning Flange installation to determine whether there are potential hazards beyond the warnings of this manual.

If you have any safety or operational questions pertaining to the design or application of the Young Self-Aligning Flanges as it relates to your particular installation, please contact the Engineering Manager at (570) 546-3165.

Failure to observe and follow the safety precautions may result in serious personal injury or property damage.

Young Industries looks to our customers to achieve a cooperative effort for the purpose of making each hopper installation as safe for the operator as is reasonably possible and to ensure proper maintenance and operating procedures are followed. Many times, we do not have access to the installation; therefore, your participation in the safe installation, operation and maintenance of Self-Aligning Flanges is critical.

INSTALLATION

A. RECEIVING AND INSPECTION

1. Upon receipt of equipment and material from Young Industries the following basic steps should be taken:

a. Use the packing list to determine that all the items shipped have been received. Your equipment order was carefully crated or packaged for safe shipment then given to the carrier. Check for damage.

1. Damage in transit is the responsibility of the carrier. Be sure to have the driver sign a copy of the freight bill with a notation about any damage.

2. If a shipment was sent to you by parcel post, have the postmaster complete a damage claim report.

3. Concealed damage: If equipment or goods are damaged by shipment at a later date, contact the carrier and Young Industries immediately.

4. IN ALL CASES OF DAMAGE IN TRANSIT, CONTACT THE YOUNG INDUSTRIES ENGINEERING MANAGER AT (570) 546-3165 FOR ASSISTANCE IN DETERMINING WHETHER OR NOT THIS DAMAGE MAY IN ANY WAY AFFECT SAFETY OR PROPER OPERATION OF THE SELF-ALIGNING FLANGES.

5. Keep all evidence for the inspector.

NOTE:

YOUNG INDUSTRIES CANNOT ASSUME ANY LIABILITY FOR SHORTAGES OR DAMAGED GOODS. CLAIMS MUST BE NEGOTIATED WITH THE CARRIER. CONTACT THE YOUNG INDUSTRIES ENGINEERING MANAGER AT (570) 546-3165 FOR ASSISTANCE IN RECTIFYING ANY SHORTAGE OR DAMAGE AS IT RELATES TO SAFE AND PROPER OPERATION OF YOUNG INDUSTRIES EQUIPMENT.

2. Moving the Self-Aligning Flanges
a. Trained, experienced personnel, using safe and accepted rigging practices should always perform moving and installation.

CAUTION:

WHEN MOVING SELF-ALIGNING FLANGES OR COMPONENT PARTS, BE SURE THAT MOVING PRACTICES USED ARE SAFE FOR BOTH PERSONNEL AND EQUIPMENT. CONTACT THE YOUNG INDUSTRIES ENGINEERING MANAGER IF THERE ARE ANY QUESTIONS RELATING TO WHAT CONSTITUTES SAFE AND ACCEPTED RIGGING PRACTICES FOR MOVEMENT AND/OR INSTALLATION OF SELF-ALIGNING FLANGES.

3. Storing Self-Aligning Flanges

a. If moved to storage, the equipment must be located in a dry area, preferably indoors. Outside storage will require adequate protection from the weather.

b. The Self-Aligning Flanges have been shipped with temporary guards or covers. Do not remove these covers while the Self-Aligning Flanges are in storage.

c. After prolonged storage and before startup, the Self-Aligning Flanges must be inspected by a qualified person. Contact Young Industries Engineering Manager at (570) 546-3165 for assistance.

CAUTION:

USE CAUTION TO PROTECT AGAINST OBJECTS OR DEBRIS FROM ENTERING OR DAMAGING THE SELF-ALIGNING FLANGES.

B. SUPPORTS

1. Young Industries' Self-Aligning Flanges are designed to be supported a variety of ways, see the installation drawing for details. In the case of a flange set designed to be welded in place in a convey line, Young Industries recommends a full penetration weld (single bevel or V-groove type weld) to connect the pipe stubs to the customer's pipe. Care must be used to adequately support the flanges during the welding process.

INSTALLATION

C. ASSEMBLY

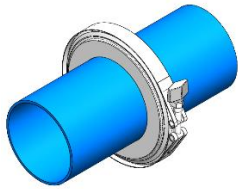
1. Self-Aligning Flanges are supplied fully assembled. The Stub ends must be bolted to mating flanges in the convey line or welded directly to the customer pipe, whichever is appropriate. Use the packing list to determine that all the items shipped have been received. Your equipment order was carefully crated or packaged for safe shipment then given to the carrier. Check for damage.

D. PRECOMMISSIONING

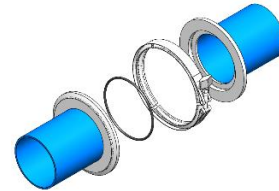
1. Inspect the installation to assure the Self-Aligning Flanges are installed properly and mounted securely.

2. Inspect the Self-Aligning Flanges and associated equipment to assure that all guards, covers and safety equipment are in place and working properly.

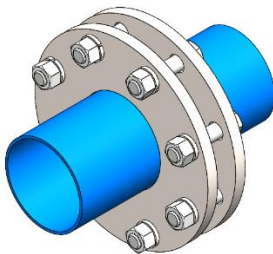
3. We urge the installation crew to notify the plant safety committee and/or the plant engineer when installation is complete and before initial operation. Those in your plant responsible for plant safety should review the Self-Aligning Flange installation before operation for safety.



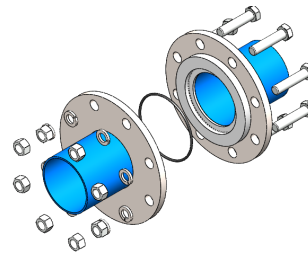
Low Pressure (15 PSIG) Assembled



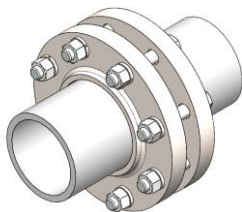
Low Pressure (15 PSIG) Exploded



Medium Pressure (50 PSIG) Assembled



Medium Pressure (50 PSIG) Exploded



High Pressure (150 PSIG) Assembled



High Pressure (150 PSIG) Exploded

OPERATION

A. STARTUP

1. Before actual operation, the operator must understand the method of connecting the Self-Aligning Flanges and the status of the supporting utilities.
2. Ensure that the O-ring is secured internally before the clamp is set in place and tightened around the flanges. In a low-pressure configuration, a t-handle clamp

will be used.

3. The general appearance of the Self-Aligning Flanges and surrounding area should be visually inspected to determine that the Self-Aligning Flanges could be operated safely and without damage.

4. Guards, covers, and safety equipment must be in place whenever the equipment is in service.

MAINTENANCE

A. LUBRICATION

1. **No lubrication** if any kind is required for the Self-Aligning Flanges.

can be operated safely. If an unsafe condition is observed, cease further operation in the convey line and immediately notify both your safety committee and the Engineering Manager at Young Industries, telephone (570) 546-3165.

B. GENERAL INSPECTION

1. Observe the clamped connection and make sure it is tightened for complete sealing.
2. Check pipe connections for tightness and leaks.
3. Inspect all safety equipment, guards, covers, and labels to assure the Self-Aligning Flanges and auxiliary equipment

C. TROUBLESHOOTING

1. When properly installed, operated, and maintained your Young Industries Self-Aligning flanges will give years of service. Table One, "Troubleshooting", gives symptoms, causes, and remedies for most problems that may be encountered.

TABLE 1 – TROUBLESHOOTING SELF-ALIGNING FLANGES

<u>SYMPTOM</u>	<u>CAUSE</u>	<u>REMEDY</u>
Leakage from the Self-Aligning Flange connection.	Loose flange connection.	Adjust the clamp screw to tighten the clamp around the flange ends. Ensure the O-ring is aligned correctly within the flange connection.


SPARE PARTS

A nameplate is furnished with all Self-Aligning Flanges. The necessary information for ordering spare parts is found on this nameplate. When ordering, please provide (a) SHOP NUMBER and (b) SERIAL NUMBER. Contact the Parts Department Manager at Young Industries, telephone 570-546-3165, for assistance. Recommended spare parts list is provided with final drawings.

WARNING:
DUST HAZARD- USE RESPIRATOR, GLOVES AND EYE PROTECTION WHEN CLEANING.

WHEN CLEANING, WET SURFACES CAN BE SLIPPERY.

DO NOT EXCEED MAXIMUM ALLOWABLE SET PRESSURE RATING OR BACK PRESSURE RATING.

	MADE BY	KFH	DATE	7/24/93	ORDER NO.		ISSUE	
	CHKD	PFEIFFER		7/26/93				
	APPR	PFEIFFER		7/26/93	SHEET	1 OF 1		
	CUST.	-						
TITLE GROUNDING/BONDING WARNING								

WARNING – ELECTRICAL GROUNDING AND BONDING ARE REQUIRED

Ungrounded machinery presents a potential hazard of fatal electrical shock from electrical power sources. Static electricity may also accumulate on ungrounded/unbonded equipment. Static electricity discharge from ungrounded equipment or between unbonded pieces of equipment may cause explosion or fire if flammable vapor or dust is present.

Electrical equipment must be installed by a certified professional electrician.

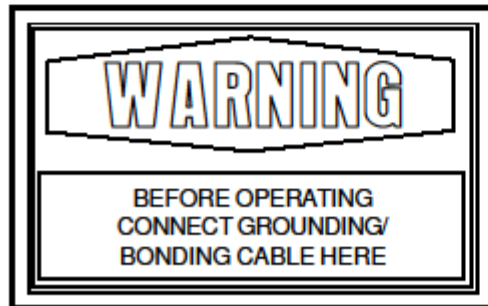
Before operating the equipment described by this manual or any other equipment in the same processing system, grounding and bonding must be completed in accordance with the National Electrical Code (NFPA 70) published by the National Fire Protection Association, 1 Batterymarch Park, Quincy, Mass. 02269-9101, and any other applicable National, State or Municipal codes. Codes for safe control of static electricity must also be observed, including the National Fire Code "Recommended Practice on Static Electricity" (NFPA 77) and any other applicable National, State or Municipal codes.

To avoid hazardous static discharge, mobile, movable or portable equipment which may attach to or come near to other equipment and which is not prohibited by codes from being connected to ground must be safely grounded and bonded before close approach or contact is made. This warning also applies to movable containers such as drums, totes, boxes and bags.

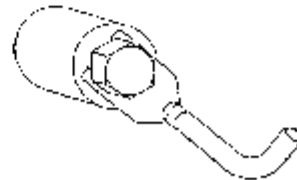
Sections of pipe, duct and gravity spout must be bonded to adjacent sections and must have a conductive path to electrical ground.

Regular periodic safety inspections of electrical systems and grounding/bonding systems are required.

LOOK FOR THESE TAGS AND TERMINAL CONNECTING POINTS



CABLES AND TERMINATIONS MUST BE SUPPLIED BY INSTALLER



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