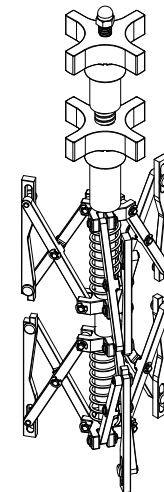
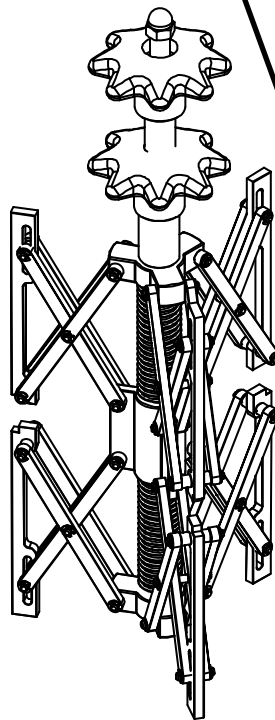
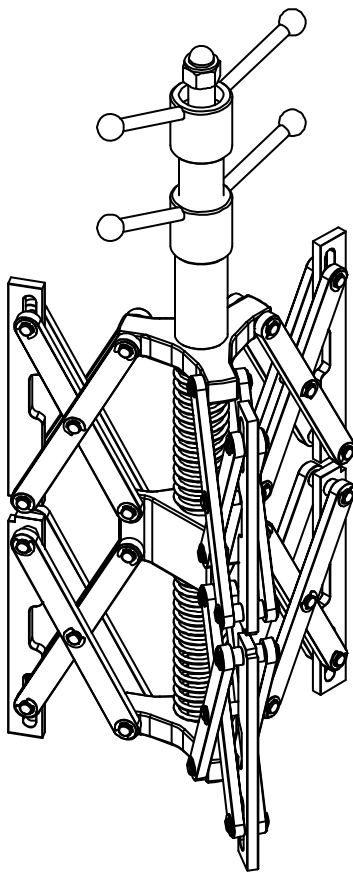


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# OPERATOR'S MANUAL

## Internal Alignment Clamp

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**WARNING**  
Before operating this tool, read and understand this Operator's Manual. Become familiar with the potential hazards of this tool. Call Sumner if you have any questions.

**SUMNER\***  
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## **OWNER'S RESPONSIBILITIES**

Throughout this publication, the words **WARNING**, **CAUTION** and **IMPORTANT** will be used to alert the user to special instructions concerning a particular operation that may be hazardous if performed incorrectly or carelessly.

### **OBSERVE THEM CAREFULLY !!**

These "Safety Alerts" alone cannot eliminate the hazards that they signal. Strict compliance to these special instructions while performing the intended operation, plus "common sense" operation are a major accident prevention measures.

#### **WARNING**



Hazards or unsafe practices which could result in severe personal injury or death.

#### **CAUTION**



Hazards or unsafe practices which could result in minor personal injury, product or property damage.

#### **IMPORTANT**



Indicates information or instructions that are necessary for proper operation and/or maintenance.

## OPERATOR SAFETY INSTRUCTIONS

### IMPORTANT



Read and understand Operators Manual before using an Internal Alignment Clamp

Become familiar with the unit's operations, applications and limitations. Always contact the factory if in doubt. Be particularly aware of its specific hazards. Additional copies of this manual are available at no charge from Sumner Manufacturing Co. Inc.

Although this clamp is manufactured for safe, dependable operation, it is impossible to anticipate those combinations of circumstances, which could result in an accident. The following instructions are recommended for safe operation of this unit.

### WARNING



Modifying the Internal Alignment Clamp in any way can cause injury.

Do not use accessories with the Internal Alignment Clamp that are not supplied by the manufacturer.

The Internal Alignment Clamp is used to fit up steel flanges to pipe, 2" - 12" (50 - 305 mm) in diameter, in a welding application.

### WARNING



The Internal Alignment Clamp is not a lifting device. This tool should never be used as the sole support for the weight of a flange.

Operate from safe position.

Prior to each use, check all parts to ensure that they are in proper operating condition.

Keep work area clean.

### IMPORTANT



Make any necessary repairs before attempting to operate the tool. Use only Sumner parts for repairs.



Wear proper clothing. Hard hat, safety shoes, and eye protection should be worn as a precaution while operating this equipment.

Avoid horseplay around equipment, and keep bystanders at a safe distance. Do not allow children to operate this unit and always keep them out of work areas.

Keep balance and proper footing at all times.

Keep alert

### WARNING

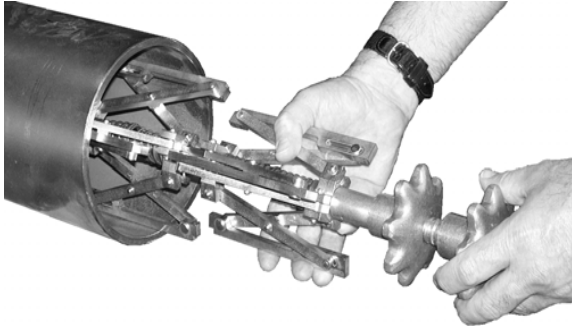


This tool should never be used as a clamp to lift or transport pipe.

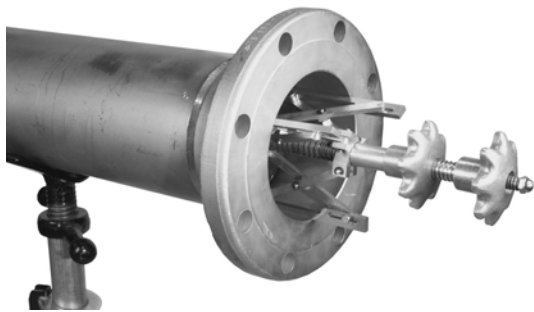
# OPERATING INSTRUCTIONS

## Standard Flange:

1. Insert first set of jaws (Pipe Jaws) into pipe.



2. Align the gap between jaw sets with the weld gap between the pipe and flange. (See cutaway illustration on right side of page) Tighten Pipe Jaws by turning outer knob counter clockwise. Tighten Pipe Jaws sufficiently to ensure proper alignment.
3. After Pipe Jaws are secure, open the second set of jaws (Flange Jaws) to slightly under the inside dimension of the flange.



### WARNING



Always use a Hoist or Jib Crane to support the flange.

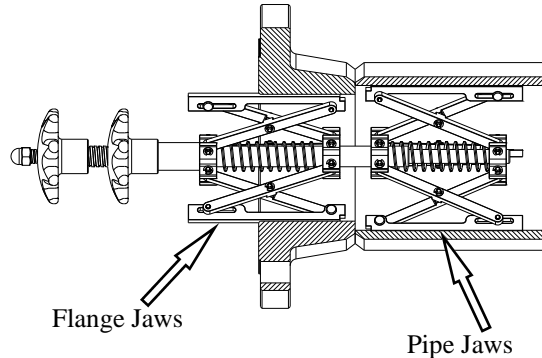
4. Slide the flange over the Flange Jaws until the predetermined weld gap is achieved. Tighten Flange jaws by turning the inner knob counter clockwise.

### WARNING



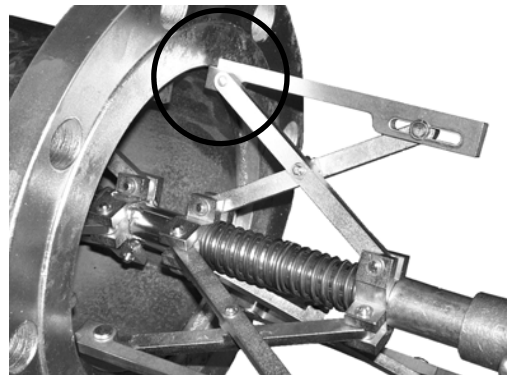
This tool should never be used as the sole support for the weight of a flange.

5. Tighten Flange Jaws sufficiently to ensure proper alignment. The flange is now aligned and ready for welding.



## Slip On Flange:

1. Slide flange onto pipe with the face of the flange towards the operator.
2. Insert first set of jaws (Pipe Jaws) into pipe until end of Pipe Jaws is flush with end of pipe.
3. Tighten Pipe Jaws by turning outer knob counter clockwise. Tighten Pipe Jaws sufficiently to ensure clamp is secure.
4. Open the second set of jaws (Flange Jaws) to slightly under the inside dimension of the flange.
5. Slide the flange onto the Flange Jaws making sure the flange sits in the notches in the Flange Jaws.

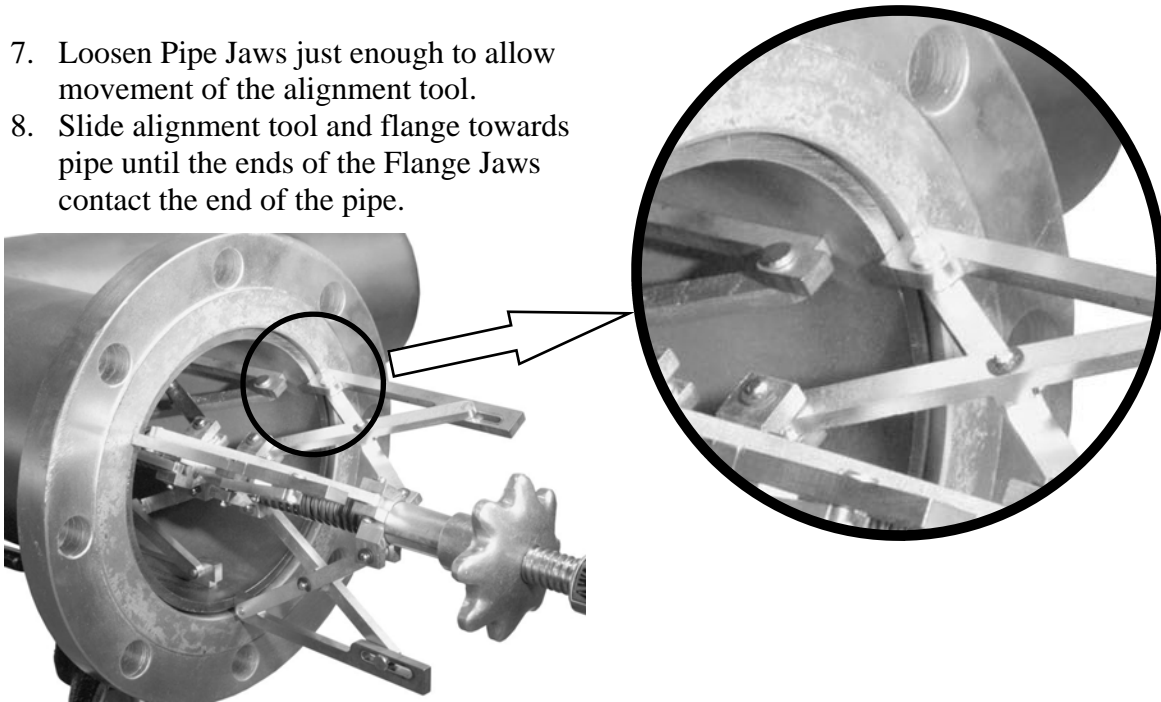


6. Tighten Flange jaws by turning the inner knob counter clockwise. Tighten Flange Jaws sufficiently to ensure proper alignment.

(Continued on page 5)

(Continued from page 4)

7. Loosen Pipe Jaws just enough to allow movement of the alignment tool.
8. Slide alignment tool and flange towards pipe until the ends of the Flange Jaws contact the end of the pipe.



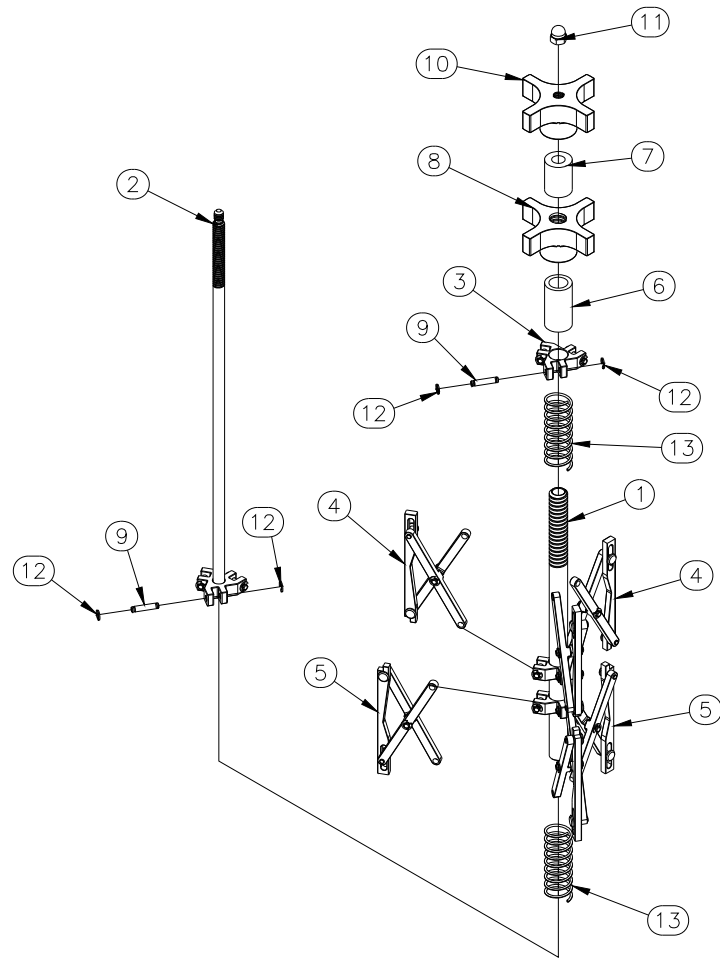
9. Tighten Pipe Jaws sufficiently to ensure proper alignment. The flange is now aligned and ready for welding.

## Trouble Shooting

Problem	Cause	Solution
Inside diameter of pipe is not aligned with inside diameter of flange.	Weight of flange is causing tool to deflect.	Support flange with hoist or jib crane.
	Flange is out of round.	Rotate flange until proper alignment is achieved.
	Pipe is out of round.	Rotate flange until proper alignment is achieved.
	Pipe walls deformed by tool.	Do not over tighten tool on thin walled pipe.
	Tool is not tight in pipe or flange.	Tighten tool to correct alignment.
	Tool is bent.	Replace Center Shaft Weldment.
	Contact pads and or joints are worn.	Replace Jaw Arm Assembly.

# Parts Breakdown

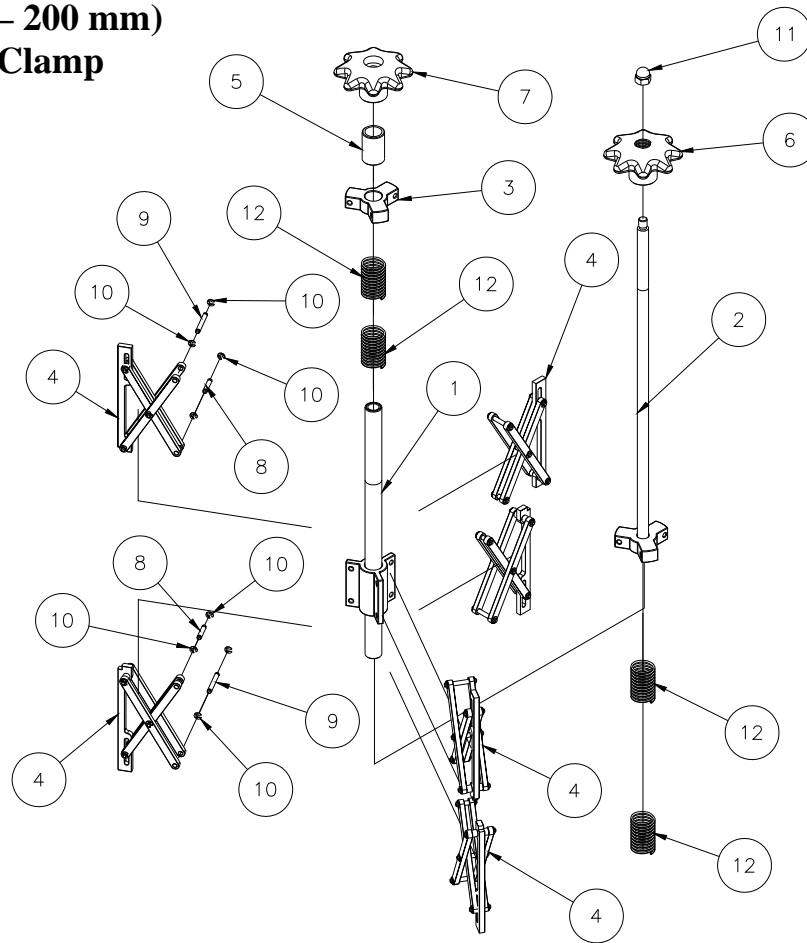
**784100 2 - 4" (50 -100 mm)  
Internal Alignment Clamp**



Item	Part No.	Description	Qty
1	784140	Center Collar Weldment	1
2	784128	Center Shaft Weldment	1
3	784130	Top Collar	1
4	784136	Flange Jaw Arm Assembly	3
5	784135	Pipe Jaw Arm Assembly	3
6	784138	Large Spacer	1
7	784137	Small Spacer	1
8	784119	Knob, 1/2 stub Acme	1
9	774152	Pin, 5/32	12
10	784120	Knob, 5/16 sub Acme	1
11	774159	Cap Nut, 1/4—20	1
12	774157	E-Clip, 5/32	24
13	776216	Spring	2

# Parts Breakdown

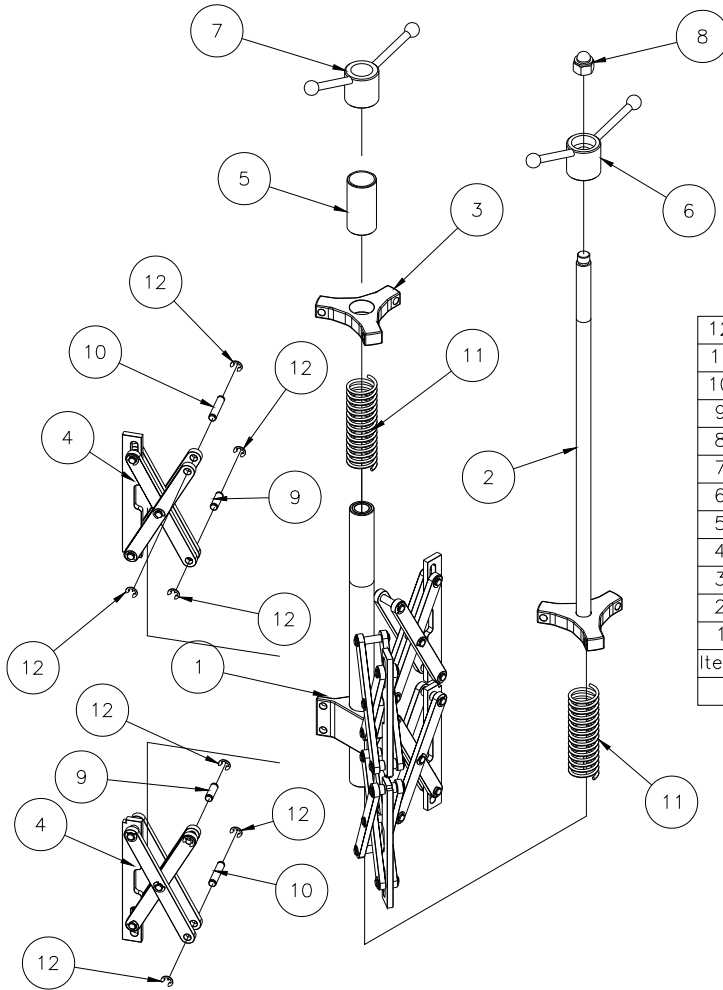
**784102 4 - 8" (100 – 200 mm)  
Internal Alignment Clamp**



Item	Part No.	Description	Qty
1	784155	Center Collar Weldment, 4 - 8"	1
2	784160	Center Shaft Weldment, 4 - 8"	1
3	784153	Top Collar, 4 - 8"	1
4	784150	Jaw Arm Assembly	6
5	784121	Center Spacer	1
6	784123	Knob, 3/4 Acme Thread	1
7	784124	Knob, 1/2 Acme Thread	1
8	774148	Pin, Straight 3/16 x .960	6
9	774149	Pin, Straight 3/16 x 1.460	6
10	774158	E-Clip, 3/16	24
11	774160	Cap nut 3/8-16 Pltd	1
12	776217	Spring, comp .98 x .78 x 2.50	4

# Parts Breakdown

**784103 8 - 12" (200 – 300 mm)**  
**Internal Alignment Clamp**



12	774145	24	E CLIP 3/8
11	776220	2	SPRING, CENTURY #11509
10	774147	6	PIN, STRAIGHT 3/8 X 1.812
9	774146	6	PIN, STRAIGHT 3/8 X 1.188
8	774162	1	CAP NUT, 5/8-11 PLATED
7	784165	1	HANDLE, 1-1/4 ACME THREAD 8-12"
6	784164	1	HANDLE, 3/4 ACME THREAD 8-12"
5	784163	1	CENTER SPACER 3"
4	784151	6	JAW ARM ASSY. LARGE
3	784154	1	COLLAR, TOP 8-12"
2	784161	1	CENTER SHAFT WELDMENT 8-12"
1	784156	1	CENTER COLLAR WELDMENT 8-12"
Item	Part No.	Qty	Description
Parts List			