

# VALMONT MITIGATOR™ TR1 VIBRATION DAMPER INSTALLATION INSTRUCTIONS



**1.800.825.6668**  
***www.ValmontStructures.com***



## TOOLS NEEDED

- 9/16" box wrench
- 3/16" hex key
- 1/8" hex key
- Level
- 3/4" - 1-1/4" Heavy duty stainless steel banding and required banding tools

## READ ALL INSTRUCTIONS BEFORE BEGINNING INSTALLATION

## INSTALLATION INSTRUCTIONS

### 1) AFTER OPENING THE BOX, CHECK THAT ALL CONTENTS ARE PRESENT:

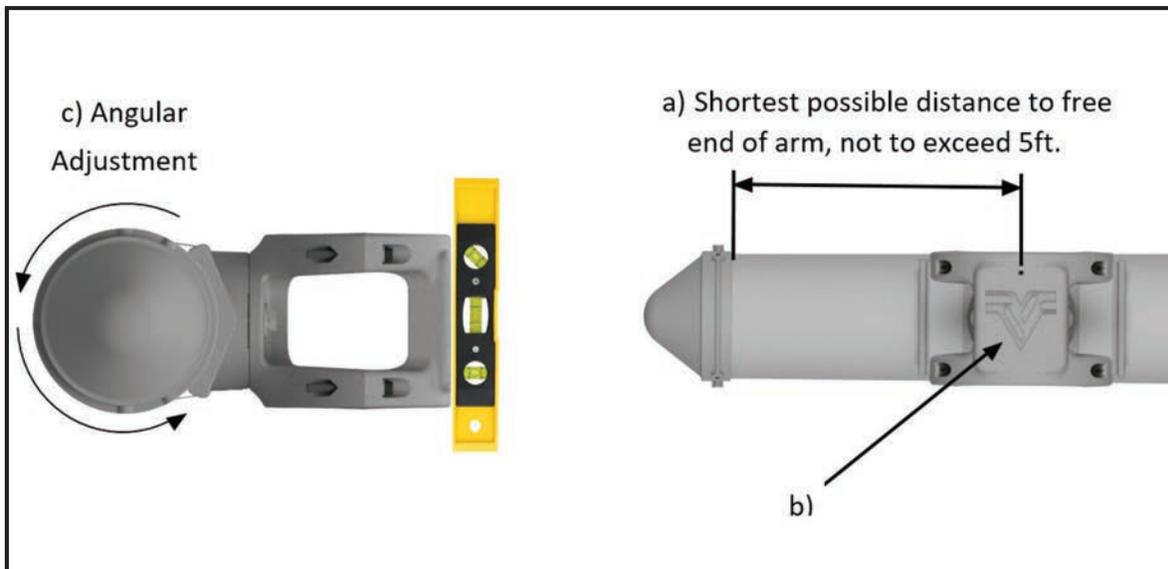
- a)** 1 - TR1 Clamp with hardware (Boxed)
- b)** 1 - TR1 Damper (DO NOT REMOVE THE END CAPS OF THE TUBE)

**Note:** The Valmont® Mitigator™ TR1 Damper is a sealed device; containing strong internal magnets creating a magnetic field extending externally beyond the casing.

**CAUTION:** This magnetic field can be harmful to pacemakers and other medical devices.

**2 ) REMOVE THE CLAMP FROM THE BOX AND BAND THE CLAMP ONTO THE ARM USING 3/4" TO 1-1/4" HEAVY DUTY STAINLESS STEEL BANDS (NOT INCLUDED) AND APPLY THE FOLLOWING:** (See Figure 2)

- a) Band the clamp as close to the free end of the mast arm, not to exceed 5 feet, to ensure the best vibration dampening performance. If there is a traffic signal or sign located toward the end of the mast arm, you might want to consider hiding the damper behind it.
- b) The Valmont® "V" on the clamp should be right side up.
- c) Using a level on the flat surface where the Valmont "V" is embossed (b), check that the TR1 Clamp is plumb vertically (0 +/- 1 degree) from the axis of the arm before tightening the bands.



**Figure 2**

### 3) AFTER BANDING THE CLAMP TO THE ARM:

- a) Loosen all four socket head cap screws until you reach a 3/4" gap in the clamp halves (as indicated in Figure 3). Be sure that the nuts do not back off of the screws.
- b) Loosen set screw above the Valmont® "V".
- c) Loosen two hex head bolts. (Note: The TR1 Clamp should now rotate within its set range of motion.)

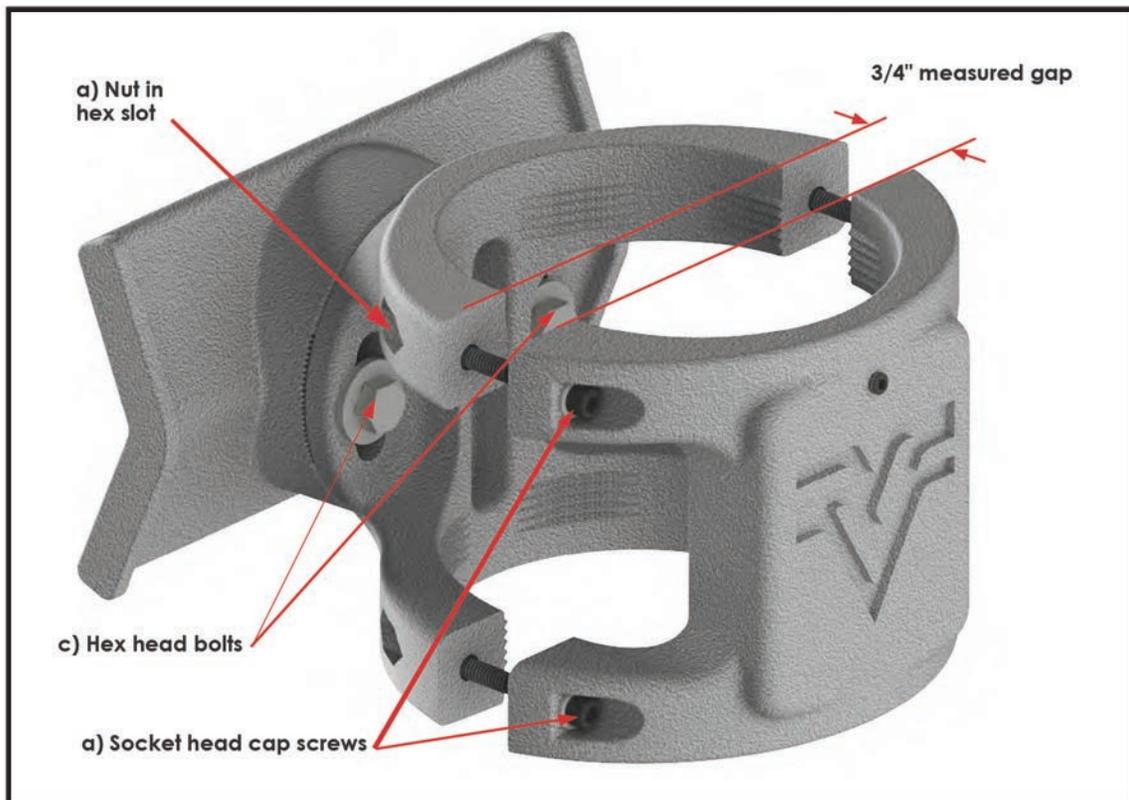


Figure 3

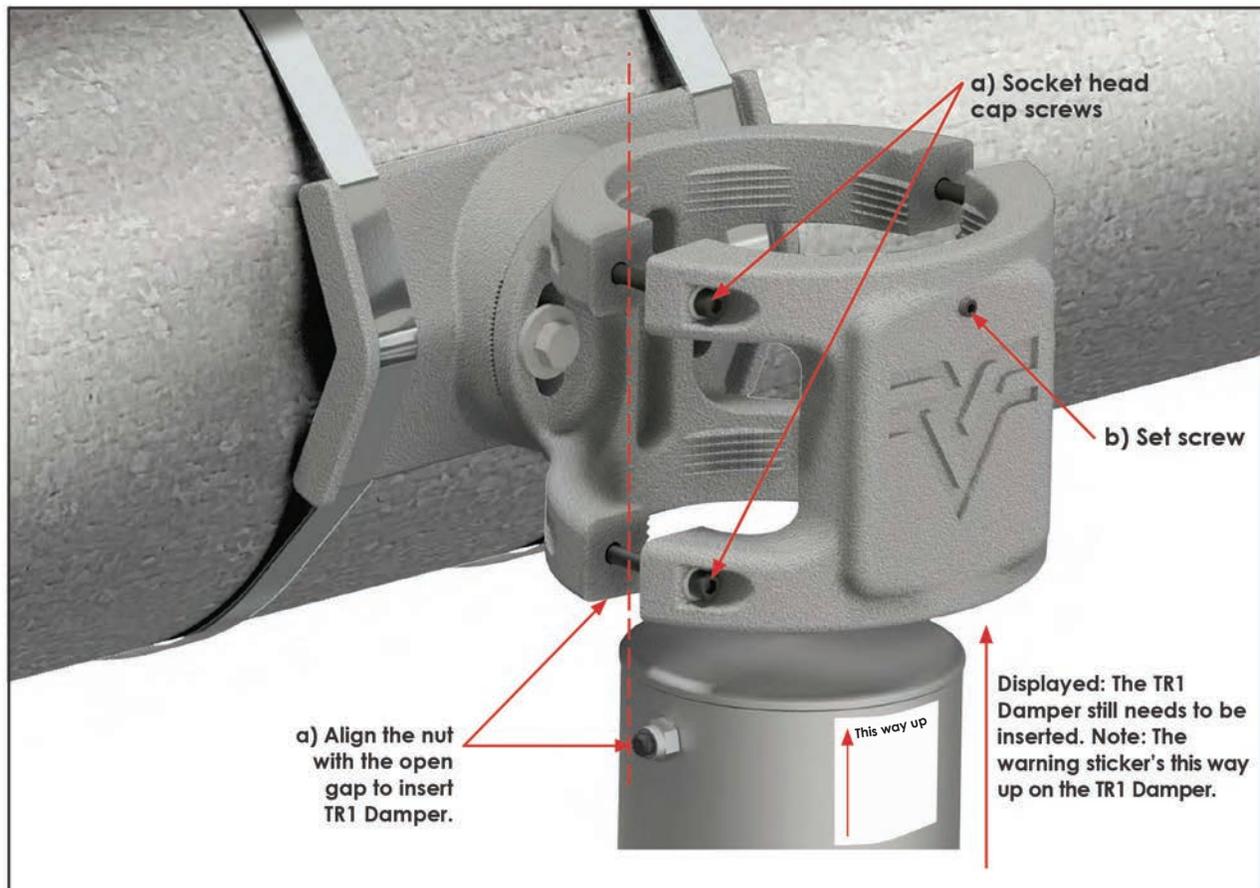
**4) INSERT THE TR1 DAMPER INTO THE TR1 CLAMP FROM THE BOTTOM, UNTIL IT IS WITHIN 8" OF THE CENTER OF THE DAMPER TUBE.** (See Figure 4)

(Note: Be sure that you insert the TR1 Damper into the TR1 Clamp taking note of the direction indicated on the sticker of the Damper, as shown in figure 4.)

- a) Tighten all four socket head cap screws to hold the TR1 Damper in place, making sure to maintain an even gap on both sides of the TR1 Clamp. Tighten until snug, then an additional 1/2 turn of each screw.

**CAUTION:** Do not overtighten and ovalize the TR1 Damper tube. This will cause the TR1 Damper to NOT function properly.

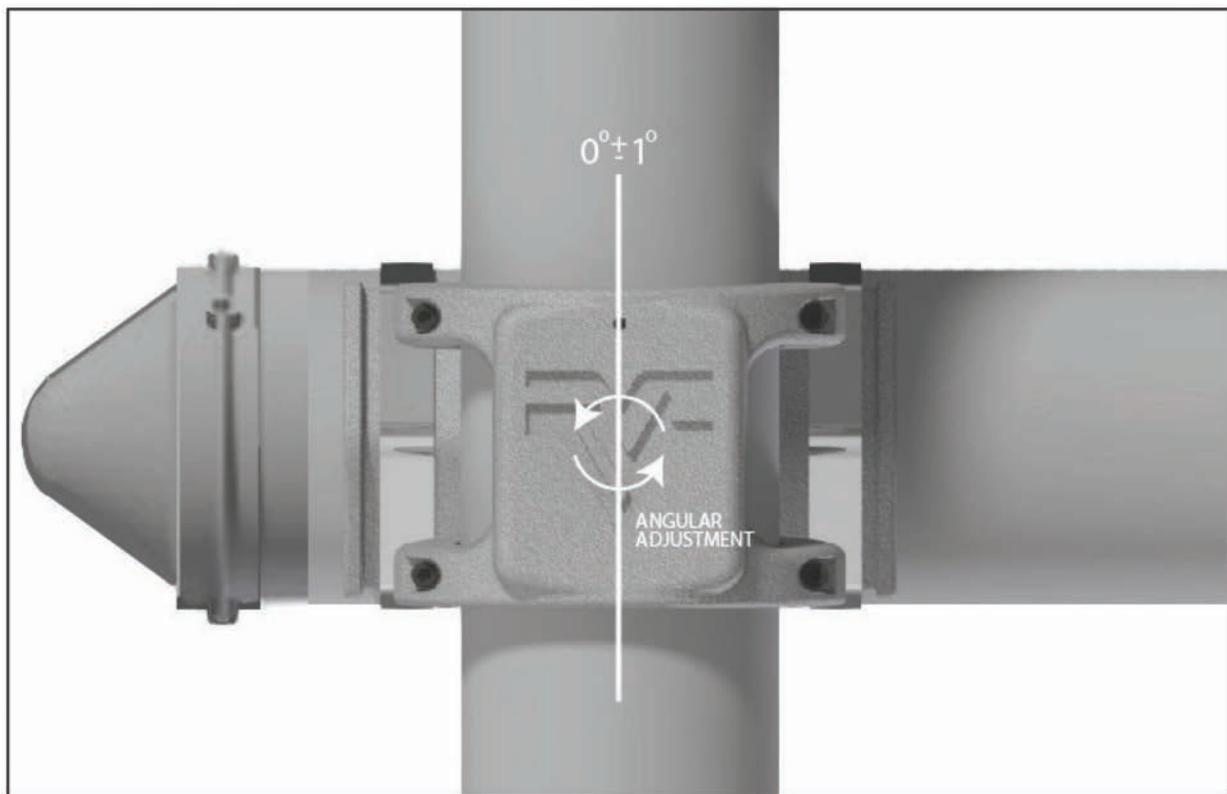
- b) Tighten set screw above the Valmont® "V" to snug, then an additional 1/4 turn.



**Figure 4**

**5 ) ROTATE THE TR1 CLAMP TO BE PLUMB VERTICALLY (0 +/- 1 DEGREE), AND TIGHTEN THE TWO HEX HEAD BOLTS TO SNUG, THEN AN ADDITIONAL 3/8 TURN. (See Figure 5)**

(Note: Using the indexing to assist in finding level, and to hold position when tightening.)



*Figure 5*

**6 ) CHECK THAT THE TR1 DAMPER IS WITHIN 1 DEGREE OF PLUMB IN ALL DIRECTIONS. AFTER INSTALLATION IS COMPLETE, CHECK THE CASING FOR OBJECTS MAGNETICALLY ATTACHED TO THE TR1 DAMPER. IF ANY, REMOVE THESE OBJECTS WHICH WILL RENDER THE TR1 DAMPER INEFFECTIVE.**

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**Contact: Carl Macchietto - CMacchietto@valmont.com**

**P: +1 (402) 359-6735 / 800-825-6668**

**[www.ValmontStructures.com](http://www.ValmontStructures.com)**