# SCC Inc.

### **Installation Instructions**

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## **AGA92.1**

### **Product Description**

The AGA92.1 manual kit precisely locks the position of any VKG... butterfly valve. The kit allows for precision position adjustment by rotating the turnbuckle; (14) revolutions make a 90° stroke. Hex nuts are tightened against the turnbuckle to prevent slippage.

Exclusive, patented technology\*

### **Components Supplied**

Figure 1 shows the components supplied with the AGA92.1 manual kit:



Figure 1: Pieces Supplied with the AGA92.1 Manual Kit

- 1. Crank arm
- 2. Mounting bracket
- 3. Turnbuckle
- 4. #10-32 right-hand rod end
- 5. #10-32 left-hand rod end
- 6. (3) #10 spacers
- 7. #8-32 x 3/8" set screw

- 8. (2) M6 x 20mm low head socket cap screws
- 9. #10-32 right-hand hex nut
- 10. #10-32 left-hand hex nut
- 11. #10-24 x 3/4" socket cap screw
- 12. #10-24 x 7/8" socket cap screw
- 13. (2) #10 split lock washers

<sup>\*</sup>Patented under US Patent No. 9,915,352

#### **Recommended Installation Tools**

The following tools are recommended for installing the AGA92.1 manual kit:

- 4mm hex key
- 5/64" hex key
- 5/32" hex key

• (2) 3/8" open end wrenches (or crescent wrenches)

#### **Installation Procedure**

1. Using a 4mm hex key, remove the two M6 x 10mm screws shown in Figure 2a below. Save the two M6 split lock washers and discard the screws. Using these lock washers along with the two M6 x 20mm low head socket cap screws, install the mounting bracket in the orientation shown in Figure 2b below.

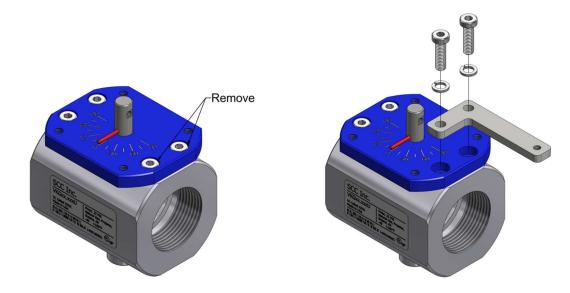


Figure 2a: Remove M6 Socket Cap Screws Figure 2b: Mounting Bracket Installation

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#### **Installation Procedure (continued)**

2. Slide the crank arm over the valve shaft in the orientation shown in Figure 3. Rotate it so that the threaded hole in the crank arm lines up with the drilling in the valve shaft. Using a 5/64" hex key and the #8-32 set screw, fasten the crank arm to the valve shaft.



Figure 3: Crank Arm Installation

3. Thread the #10-32 right-hand hex nut as far as possible onto the #10-32 right-hand rod end by hand. Do the same with the #10-32 left-hand hex nut and rod end. Next, thread each rod end into the turnbuckle approximately 19 full turns by hand. One of the holes in the turnbuckle has right-hand threads while the other hole has left-hand threads. When complete, the turnbuckle assembly should look like Figure 4 below.



Figure 4: Turnbuckle Assembly

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#### **Installation Procedure (continued)**

4. Install the turnbuckle assembly onto the valve using a 5/32" hex key, the #10-24 x 3/4" socket cap screw, the #10-24 x 7/8" socket cap screw, the (3) #10 spacers, and the (2) #10 split lock washers as shown below in Figure 5. The 3/4" length socket cap screw threads into the crank arm and uses (1) #10 spacer. The 7/8" length socket cap screw threads into the mounting bracket and uses (2) #10 spacers. The valve shaft may need to be turned slightly so that the hole in the crank arm lines up with the hole in one of the rod ends on the turnbuckle assembly.



Figure 5: Turnbuckle Assembly Installation

5. At this point, the installation of the AGA92.1 manual kit is complete. The valve position can be precisely adjusted by rotating the turnbuckle by hand. Once the desired valve position is reached, use (2) 3/8" open end wrenches (or crescent wrenches) to tighten the hex nuts against the turnbuckle.

NOTE: There are two holes in the side of the turnbuckle that can be used to view the threads of the rod ends. The turnbuckle should never be turned so far such that the end of the threads can be seen through these holes. If the end of the threads can be seen, there is insufficient thread engagement between the rod end and the turnbuckle. As long as the above installation steps were followed correctly, any valve position from 0-90° can be reached without the end of the threads being visible through the holes in the side of the turnbuckle.

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