

Vacuum Gripper Wrist Rotate Assembly Guide.

Updated 03/29/2011

Safety first! Wear eye protection and never touch a powered robot!

Note: Loctite or thread locks can be used on the construction of the aluminum components. However, don't use them with Lexan, as they are not necessary and may cause damage.



Image of completed assembly.

Step 1.

Remove the gripper assembly from the "C" bracket and set it aside; it will not be used with the wrist rotate.



Figure 1.

Step 2.

Make sure the servo is in center position and remove the servo horn. Be careful to not turn the servo shaft. Drop the HS-225MG into the wrist rotate bracket from the top as shown. Use the following diagram for attachment information.

4 x

3mm x 8mm Steel Screw 3mm Steel Standard Nut

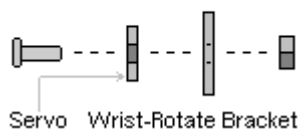


Figure 2.

Step 3.

Drill out the two holes on the servo horn to 1/8" as shown. This can be done by hand with a drill bit like this.



Figure 3-1.



Figure 3-2.

Step 4.

Reattach the servo horn in the same position.



Figure 4.

Step 5.

Attach the 1/8" elbow fitting to the small lexan disc with a 1/4-28 nut. Be sure that both the corners of the nut and the elbow do not overlap the other holes on the disc.

1 x

1/4-28 Steel
Standard Nut



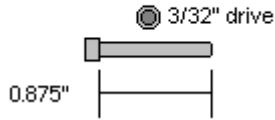
Figure 5.

Step 6.

Thread the 7/8" screws through the lexan, washer and 1/2" standoffs as shown. Don't tighten these down all the way yet.

2 x

4-40 x .875" (7/8") Steel
Hex Socket Head Cap Screw



2 x

1/4" ID Steel
Washer



Figure 6.

Step 7.

Attach this assembly to the servo horn using two 4-40 .250" nuts. Go ahead and tighten these all the way down now.

2 x

4-40 x .250" Steel
Standard Nut



Figure 7.

Step 8.

Slide the suction cup onto the end of the elbow fitting.



Figure 8.

Step 9.

Slip the gripper assembly back onto the arm assembly, and attach with two #2 x .250" tapping screws. Add a 6" or 12" extender cable (or both, if necessary) to the wrist rotate servo, and plug into channel 5 on the SSC-32.

Attach the vacuum tube to the elbow fitting and route it to the syringe assembly.

If using wire ties to keep the tube secured, be sure to leave enough slack to allow the wrist to rotate fully. Remember to NOT overtighten the wire tie as this will compress the tubing, not allowing air to move through.



Figure 9.

2 x

#2 x .250" (1/4") Steel
Phillips Head Tapping Screw

