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## Caster Wheel Kit (#28971)

### Features

- Dual 3-inch (76 mm) sealed pneumatic rubber tires made by Du-Bro
- Precision machined 6061 aluminum parts made in-house at Parallax headquarters in California, USA
- High quality ball bearings for "friction free" swivel action
- Quick and easy assembly
- Dramatically improves the performance and aesthetic appeal of mid-size robots
- Well suited for use with the Motor Mount and Wheel Kit with Position Controller (#27971)



Congratulations on purchasing the Caster Wheel Kit! You will find that the components contained in this kit offer the utmost in quality and performance. The kit features precision machined 6061 aluminum parts combined with high quality ball bearings and durable 3-inch Du-Bro pneumatic rubber tires. The dual independent tire design reduces vibration and drag, while also increasing its load-carrying capacity.

This caster wheel kit uses precision shielded ball bearings, making the kit completely maintenance-free for long life and consistently high performance. The durable sealed pneumatic tires are low-bounce and provide a smooth ride, even on rough surfaces.

The Caster Wheel Kit is designed to work well with our Motor Mount and Wheel Kit with Position Controller (#27971). The top surface of the Caster Wheel's mounting plate and the top surface of the motor bearing blocks in the Motor Mount and Wheel Kit are both at the same height, which simplifies the chassis design.

### Parts List

Please check your kit's contents before beginning. If any parts are missing, contact the Parallax sales department for assistance (contact information is show above).

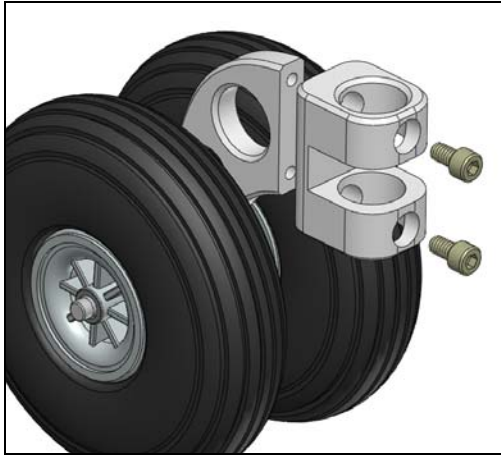
Stock Code	Description	Quantity
730-00010	Arm Assembly	1
730-00020	Swivel Block	1
730-00015	Swivel Rod	1
730-00025	Base Plate	1
700-00086	Socket Cap Screw, #6-32 x 1/4 inch length	2
700-00085	Set Screw, slotted #6-32 x 1/8 inch	1
724-00002	Flange Bearing, 0.25 inch ID, 0.5 inch OD	2
726-00002	Shaft Collar, 0.25 inch ID	1

### Tools and Materials Required (Not Included)

- 7/64 inch hex key
- 3/32 inch hex key
- Small flat-head screwdriver
- Hammer (optional)
- Thread-locking compound (optional)
- Three # 6 socket cap screws for mounting the Caster Wheel Assembly

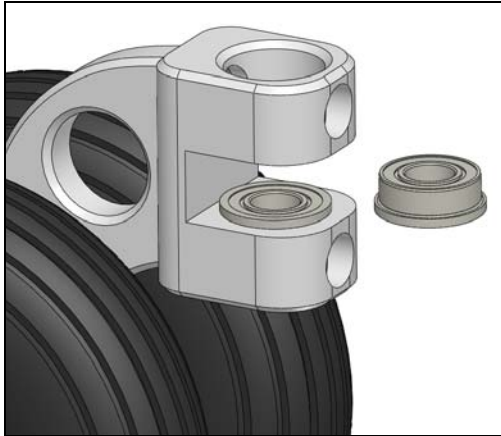


## Assembly Instructions



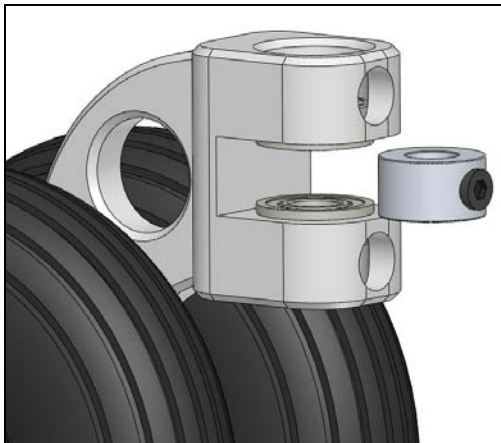
### **Step 1:**

Connect the caster wheel arm assembly to the swivel block using a  $\frac{7}{64}$  inch hex key and two #6-32 x  $\frac{1}{4}$  inch socket cap screws.



### **Step 2:**

Insert both bearings as shown facing outward from the center of the swivel block.



### **Step 3:**

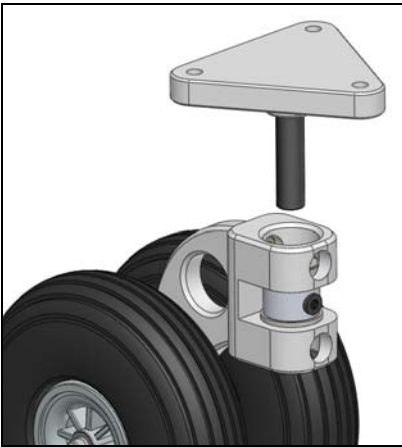
Position the shaft collar between both flange bearings in the swivel block.



#### **Step 4:**

Insert the swivel rod into the mounting plate. The machined flat on the rod should face the set screw. Make sure the rod is pressed as far into the plate as possible. This step may require a hammer to lightly tap the rod into the slot.

Secure the rod in place using the slotted #6-32 set screw. For improved results, apply a small drop of thread locking compound to the set screw before tightening it into position.



#### **Step 5:**

Insert the swivel rod through the center of the bearings and shaft collar. There should be about a 0.1 inch (2.5 mm) gap between the bottom surface of the mounting plate and the top surface of the swivel block.

Using the 3/32 inch hex key, securely tighten the shaft collar set screw to lock the height of the mounting plate. The overall height of the caster wheel assembly can be adjusted if necessary by modifying how far the swivel rod is inserted through the shaft collar.



#### **Assembly Complete!**

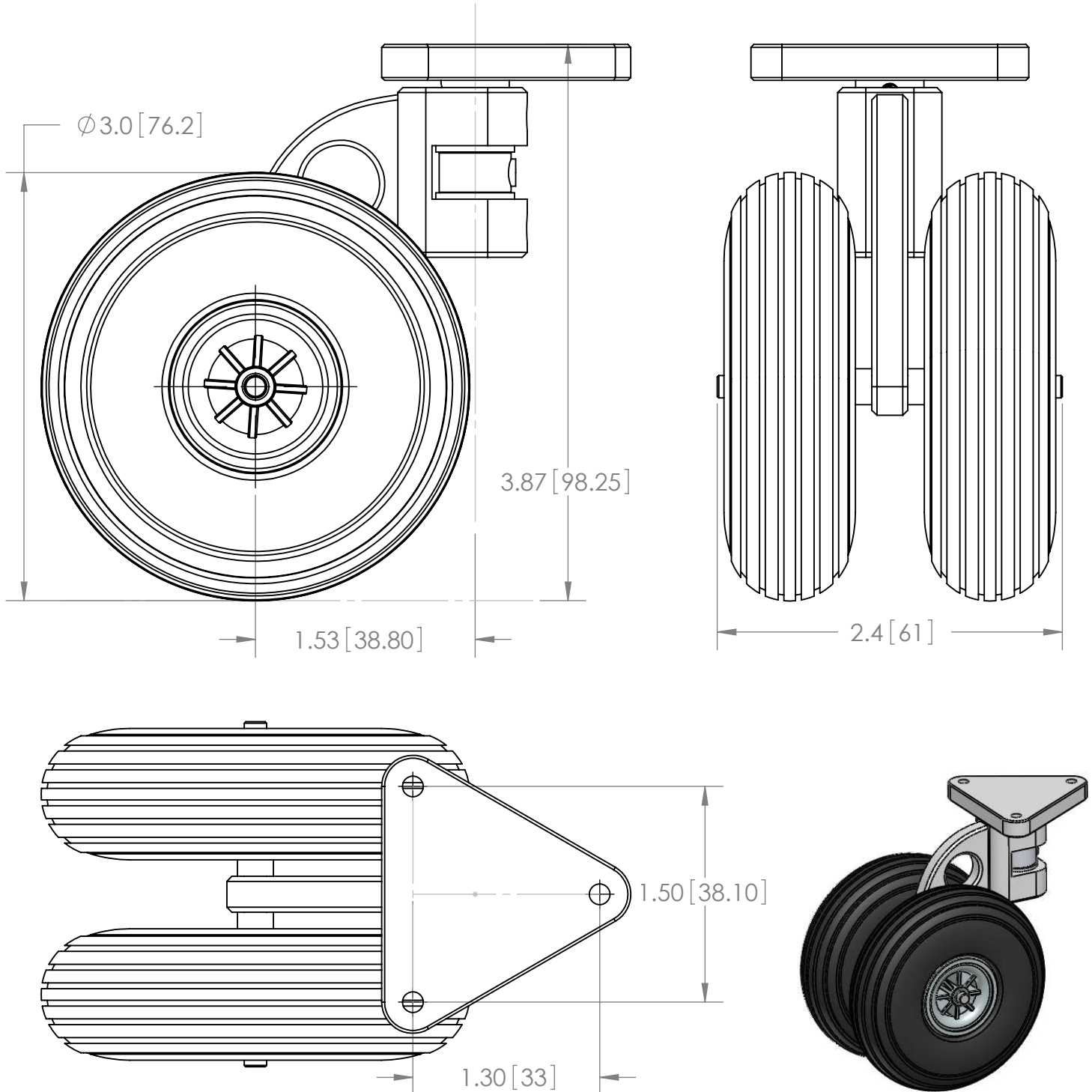
The caster wheel kit is completely assembled and ready to be installed using three #6 socket cap screws (not included).

For additional product information, check out the Caster Wheel Kit (#28971) product page at [www.parallax.com](http://www.parallax.com).

Material: ---

**NOTES**

1. Dimensions are given as reference. For additional dimensional information see the eDrawing model available for download on the web at [www.parallax.com](http://www.parallax.com).



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**UNLESS OTHERWISE SPECIFIED**

DIMENSIONS ARE IN INCHES (mm)  
LENGTH TOLERANCES:  
X.XX  $\pm 0.005$  IN  
X.XXX  $\pm 0.001$  IN  
ANGLE TOLERANCES:  
X  $\pm 2^\circ$   
X.X  $\pm 0.5^\circ$

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DATE 20081006

Part # 28971

REV A

Parent Part # ---

TITLE

Caster Wheel Kit

SCALE: 1:1

DRAWN BY K. McCullough

SHEET 1 OF 1