

WCP Polycord Pulleys- User Guide (Rev 1)





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What are the WCP Polycord Pulleys?

Do you need a single pulley? A double? A triple? You can have 1,323 pulleys, or even more, all by stacking a single part! Our new stackable pulleys allow you to have as many (or as little) pulleys as you'd like by stacking a single part over and over and over. The stackable pulleys are designed to fit together seamlessly, and are sized such that the outer diameter of a 1/4" polycord cable on the pulley is either 1.625" or 2" to match with our flex wheel sizes.

These pulleys are:

- The same width as our original polycord pulleys in the same configuration
- Infinitely stackable
- Sized so that the polycord touches the object, not the pulley
- Designed with piloting pins and pockets to make assembly a breeze



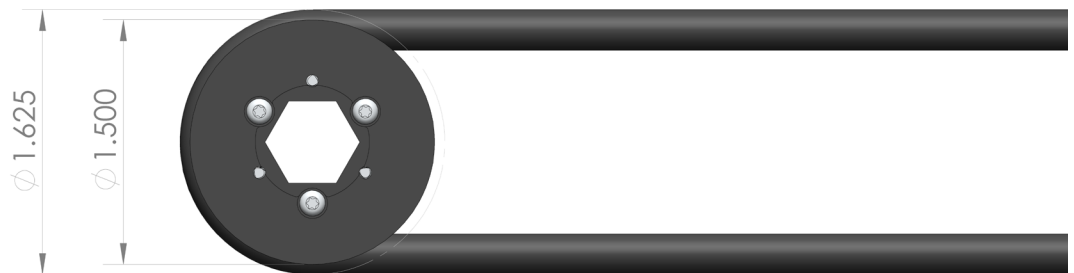
Recommended Tools

| Picture | Name |
|---|----------------|
|  | T7 Torx Driver |



Pulley Sizing

The 1.625" and 2" pulleys are sized so that the OD of the polycord sits at either 1.625" or 2" diameter. The flange also sits slightly below this OD so the polycord will be the only part to contact the game object. This can be seen in the images below.





Assembly Instructions

The pulleys can be assembly with or without the #2-28 screws. Shaft collars or snap rings may be used to constrain the slices. The screws are the recommended method as they will keep the slices together if they are removed from the shafting.

1.625" Pulley Components

- WCP-0096 - 1.625" Pulley (1/4" Groove, Single)
- WCP-0097 - 1.625" Pulley Slice (1/4" Groove, Double)

2" Pulley Components

- WCP-0358 - 2" Pulley (1/4" Groove, Single)
- WCP-0359 - 2" Pulley Slice (1/4" Groove, Double)

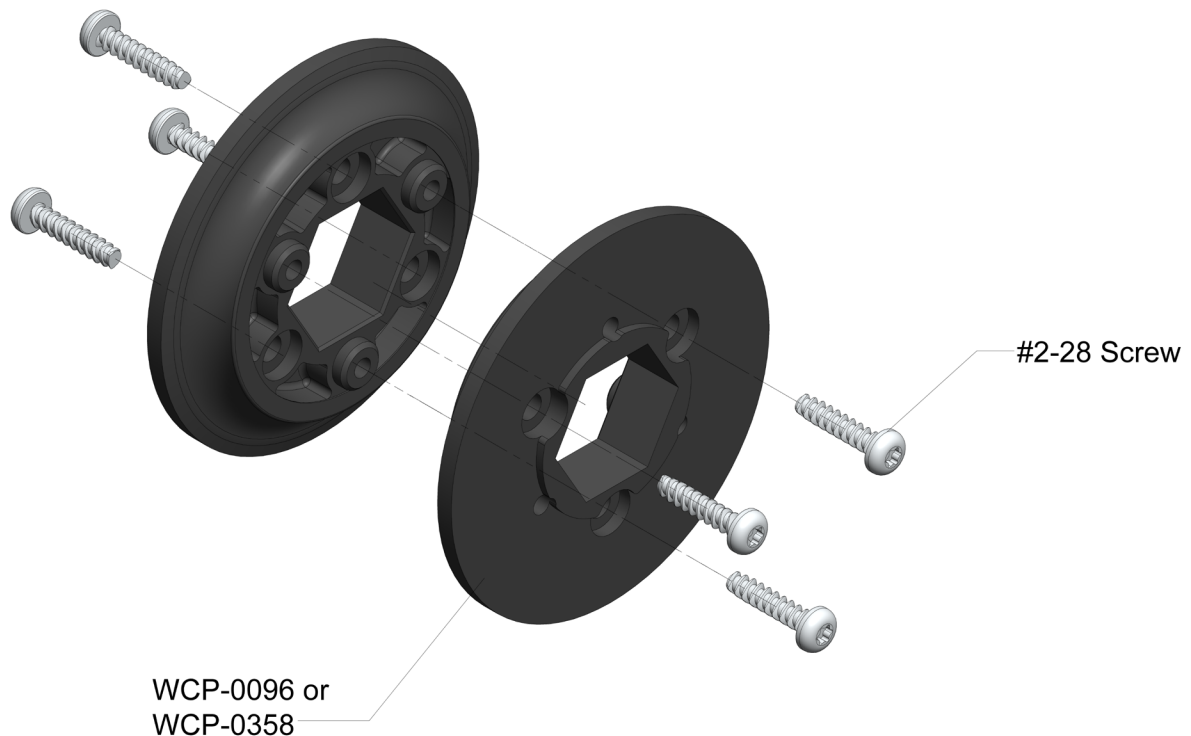
Disclaimer: The screws seen in the assembly steps are not included with the purchase of the pulley slices. These screws can be purchased separately as a 50 pack, WCP-0356.



Single Pulley Assembly

Align the pin on one Single slice with the matching pocket on the other Single slice. Install the desired amount of #2-28 screws to hold the pulley slices together. Be sure to tighten the screws fully. There should be no gap between the pulleys when they are assembled.

Note: Screws are not included and can be omitted if the slices are constrained by collars or snap rings.



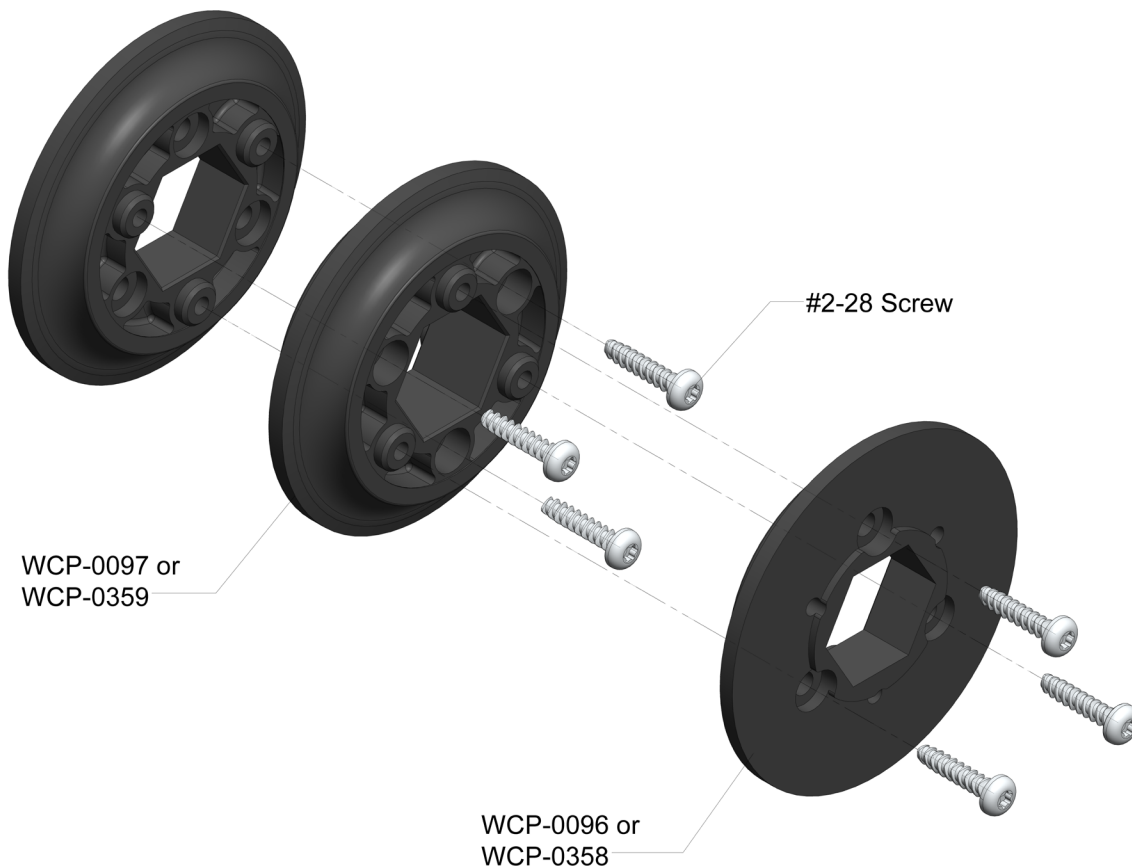


Double Pulley Assembly

Align the pin on the Single slice with the matching pocket on the Middle slice. Install the desired amount of #2-28 screws to hold the pulley slices together. Be sure to tighten the screws fully. There should be no gap between the pulleys when they are assembled.

For the double pulleys, the screws will need to come from the inside of the pulley stack into the Single slice. For the final slice, the screw goes from the Single slice into the Double slice. This can be seen in the image below.

Note: Screws are not included and can be omitted if used with the 7/8" long VersaRoller insert or the slices are constrained by collars or snap rings.





Multi Stack Assembly - Step 1

Align the pin on the Single slice with the matching pocket on the Double slice. Install the desired amount of #2-28 screws to hold the pulley slices together. Be sure to tighten the screws fully. There should be no gap between the pulleys when they are assembled.

Note: For multi stack assemblies, the screws will all be facing the same direction if screws are used. Screws are not included and can be omitted if the slices are constrained by collars or snap rings.

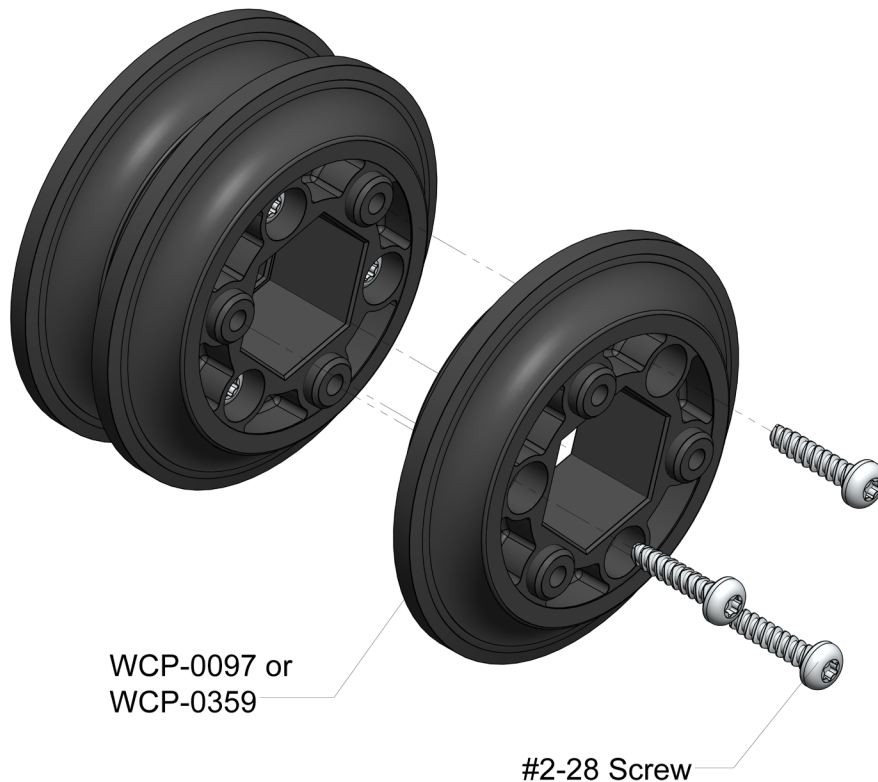




Multi Stack Assembly - Step 2

Repeat the process from the previous step with a Double slice. This process can be repeated for as many Double slices as desired.

Note: For multi stack assemblies, the screws will all be facing the same direction if screws are used. Screws are not included and can be omitted if the slices are constrained by collars or snap rings.

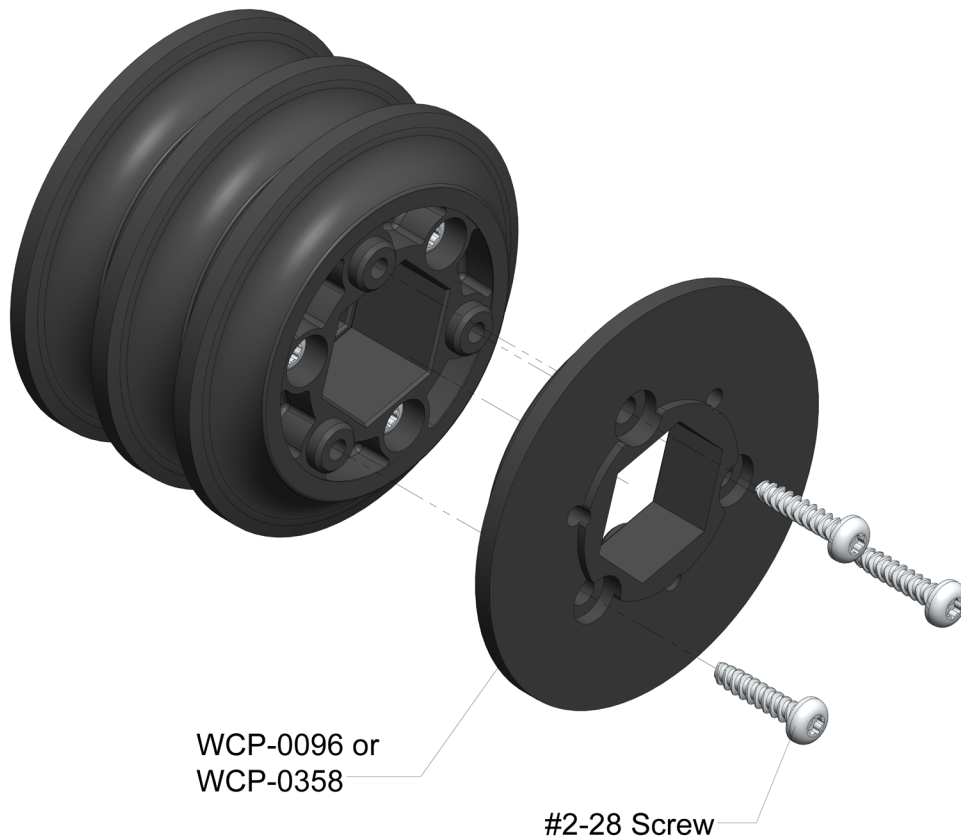




Multi Stack Assembly - Step 3

After adding as many Double slices as desired, add the final Single slice to the outside. Install the final set of screws, if screws are to be used.

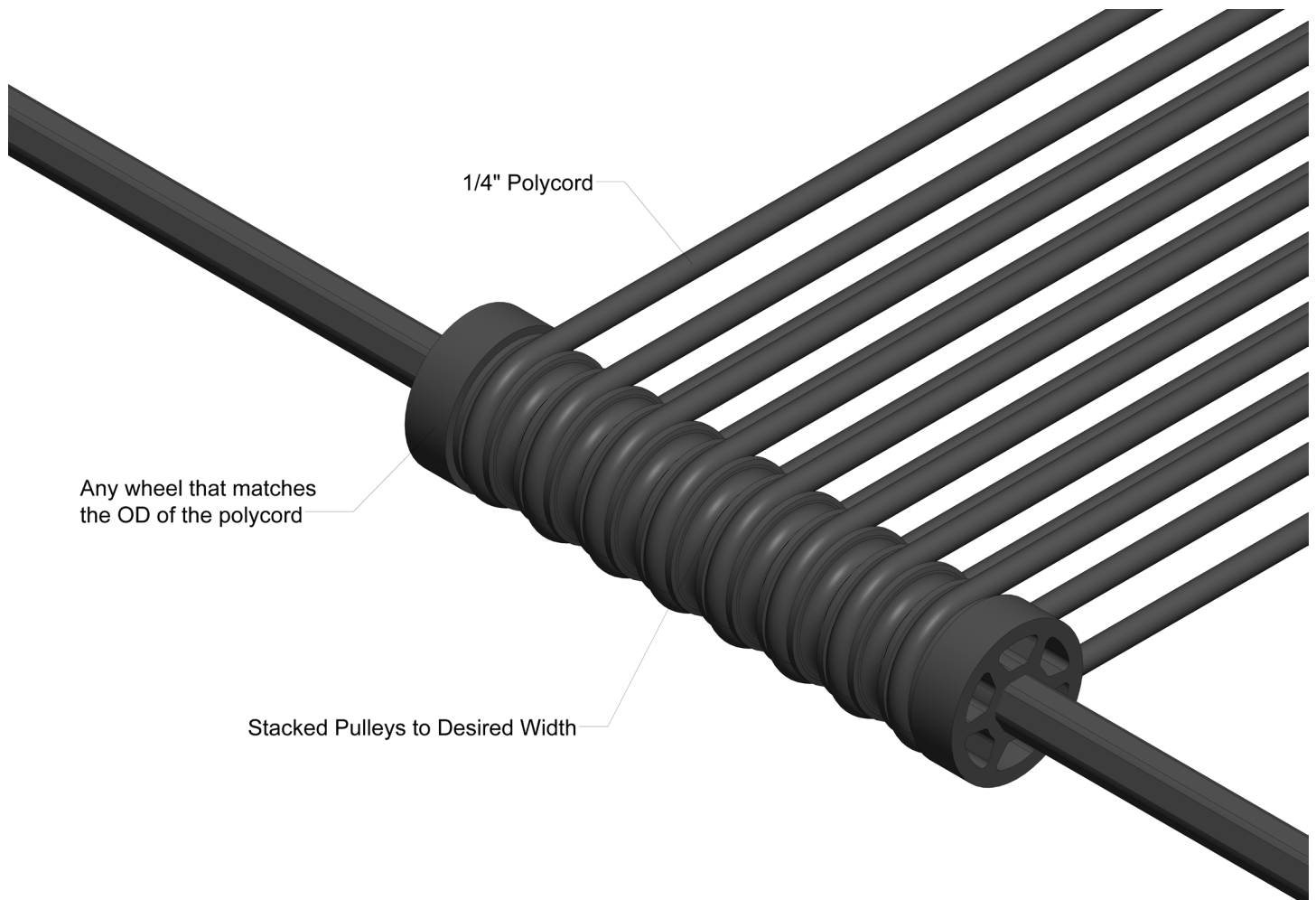
Note: For multi stack assemblies, the screws will all be facing the same direction if screws are used. Screws are not included and can be omitted if the slices are constrained by collars or snap rings.





Examples

This is an example of a larger multi stack of the pulleys. This setup can be useful for a conveyor system inside a team's robot to move or store game objects.





Kit Contents

| Picture | Name | QTY | Kit |
|---|---|-----|----------|
|  | 1.625" Pulley (1/4" Groove, Single) | 2 | WCP-0096 |
|  | 1.625" Pulley Slice (1/4" Groove, Double) | 1 | WCP-0097 |
|  | 2" Pulley (1/4" Groove, Single) | 2 | WCP-0358 |
|  | 2" Pulley Slice (1/4" Groove, Double) | 1 | WCP-0359 |



Recommended Parts to Buy

| Picture | Name | QTY |
|---|--|-----|
|  | #2-28 x .375" L Thread Forming Screw (Plastic, Black Zinc) (50-Pack) | 1 |
|  | Black Polycord (1/4" WD, 50FT) | 1 |



FAQ

Q: [Do the screws come with pulley slices?](#)

A: No the screws are not included in the slice kit as they are not required for assembly. The pulleys can be assembled with or without the screws. For a more secure assembly, the screws are recommended.



Revision Table

| Revision Date | Revision # | Description |
|---------------|------------|--|
| 4/12/2021 | 1.0 | First revision created. |
| 4/13/2021 | 1.1 | Clarified that screws are not included with pulley slices. |