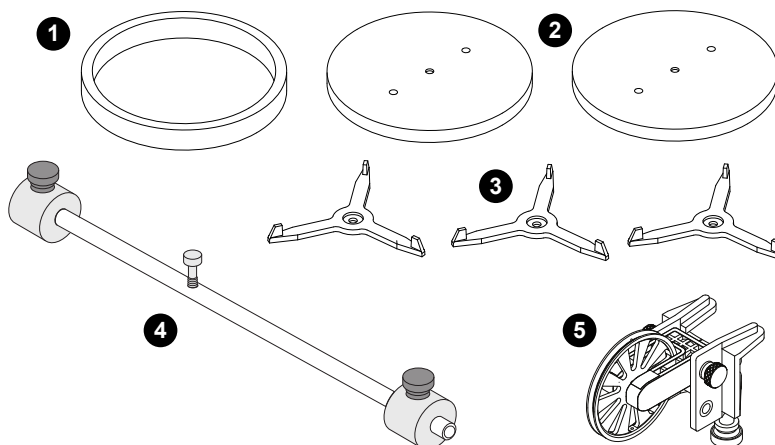


# Rotational Inertia Accessory Kit

ME-3420



## What's included

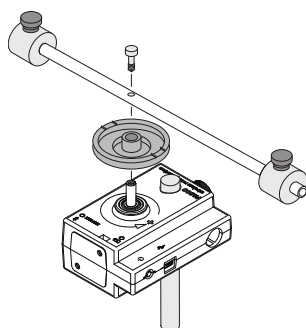
- ❶ Ring (part of ME-3419)
- ❷ 2× Disk (part of ME-3419)
- ❸ 3x Alignment Guides (part of ME-3419)
- ❹ Pendulum Accessory (ME-8969)
- ❺ Super Pulley with Clamp (ME-9448B)

## Introduction

The Rotational Inertia Accessory Kit is designed for use with any PASCO Rotary Motion Sensor (CI-6538, PS-2120A, or PS-3220). The kit can be used to perform rotational inertia, conservation of angular momentum, and pendulum experiments.

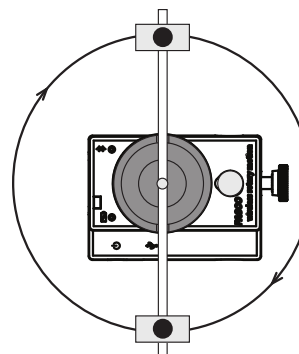
## Attaching the rod

Attach the 3-step pulley to the Rotary Motion Sensor with the underside face up. The underside of the pulley has rod guides for holding the rod in place. The 3-step pulley and the rotating shaft on the Rotary Motion Sensor are keyed to assemble only in one position. Assemble the apparatus as illustrated.

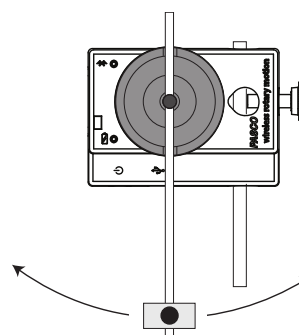


## Using the rod

The rod can be used for two purposes. The center of the rod can be attached to the shaft of the Rotary Motion Sensor and used with the point masses to find the rotational inertia of point masses.

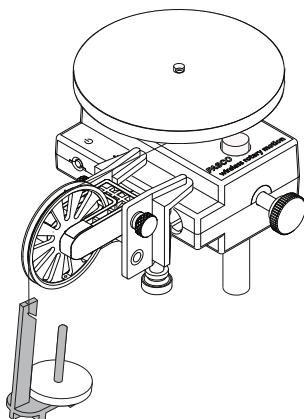


The end of the rod can be attached to the Rotary Motion Sensor shaft to use it as a pendulum.

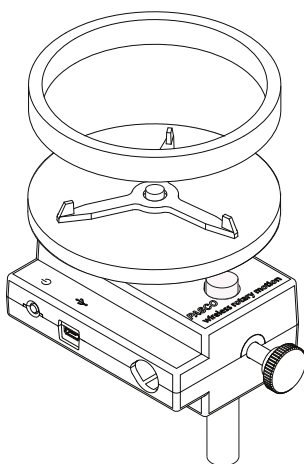


## Using the disk and ring

For rotational inertia experiments, wrap a string attached to a mass around the 3-step Pulley included with the Rotary Motion Sensor. Hang the mass over the Super Pulley to accelerate the apparatus.



To perform a conservation of angular momentum experiment by dropping the ring onto the rotating disk, first install an Alignment Guide and the disk on the Rotary Motion Sensor, securing them with the screw. When the ring is dropped onto the disk, the Alignment Guide will center the ring on the disk.



## Experiment files

Download one of several student-ready activities from the PASCO Experiment Library. Experiments include editable student handouts and teacher notes. Visit [pasco.com/freelabs/ME-3420](https://www.pasco.com/freelabs/ME-3420).

## Specifications and accessories

Visit the product page at [pasco.com/product/ME-3420](https://www.pasco.com/product/ME-3420) to view the specifications and explore accessories. You can also download experiment files and support documents from the product page.

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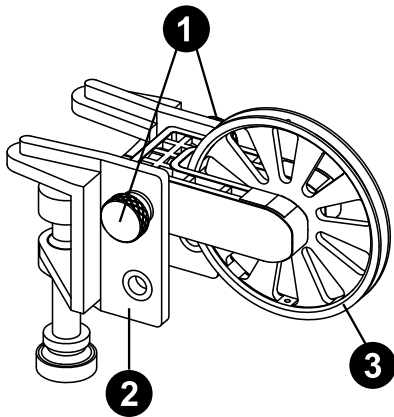
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# Super Pulley with Clamp (ME-9448B)

## Introduction

The Super Pulley with Clamp is used to clamp the PASCO Super Pulley (ME-9450A) onto various equipment, such as a dynamics track or force table. The clamp has two positions for attaching the Super Pulley. The pulley can be moved from one position to the other by removing two thumbscrews, one on either side of the clamp. Once the pulley has been moved to the desired position, replace the thumbscrews to hold the pulley in place.

## Features



### 1 Thumbscrews

Can be removed to change the position of the pulley.

### 2 Clamp

Attaches the pulley to a surface. The clamp can be tightened or loosened to attach the pulley to surfaces of different thicknesses.

### 3 Super Pulley (ME-9450A)

Includes a groove for holding a string in place.

## Usage

The Super Pulley with Clamp is included in several PASCO systems and is designed to work with a wide variety of PASCO equipment. The following is a partial list of some of these systems and other equipment.

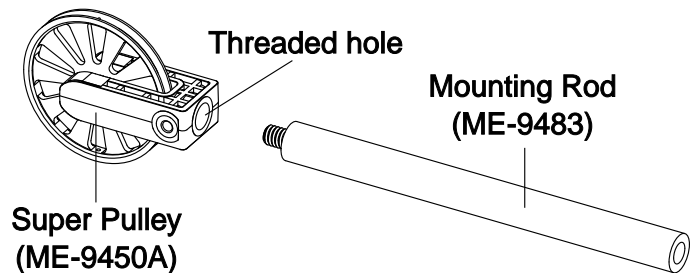
### Systems which include the Super Pulley with Clamp:

- Centripetal Force Accessory Kit (ME-8952)
- Super Pulley Force Table (ME-9447B)
- Standard Dynamics Systems (ME-5711 through ME-5719A)

### Other compatible equipment:

- 1.2 m Starter Dynamics Track (ME-9493)
- 2.2 m Starter Dynamics Track (ME-9779)
- 1 m PASTrack (ME-6960)
- Rotary Motion Sensor (CI-6538)
- PASPORT Rotary Motion Sensor (PS-2120A)
- Wireless Rotary Motion Sensor (PS-3220)

The Super Pulley can also be removed from the clamp and used with a mounting rod, such as a Pulley Mounting Rod (SA-9242) or the rods in the Mounting Rods 10-pack (ME-9483). The mounting rod fits into the threaded hole on the bottom of the pulley housing, as shown below.



## Helpful tips

When using the Super Pulley with Clamp on a force table, such as the Super Pulley Force Table (ME-9447B), keep the strings as close to the table, and as parallel to the table's surface, as possible. (See Figure 1.)

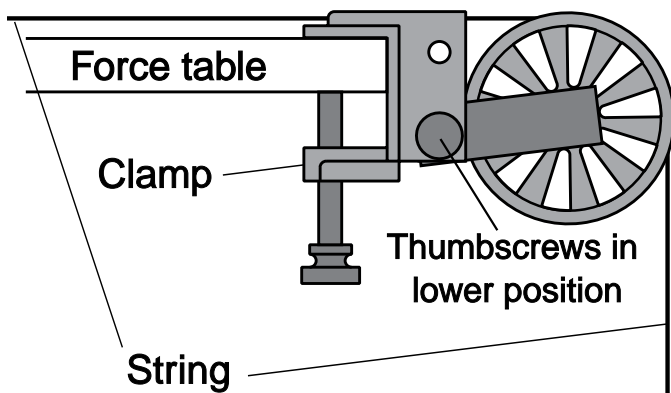


Figure 1. Attaching the Super Pulley with Clamp to a force table.

Strings should also be kept parallel when using the Super Pulley with Clamp on inclined planes, tracks, or any table that might be used for demonstration. (See Figure 2.)



**IMPORTANT:** If using a cart or other object which will be moving towards the pulley, always use a protective device such as the Elastic Bumper (ME-8998) to prevent a collision between the object and the pulley. Failure to do so may cause damage to the pulley, or to the cart or other object.

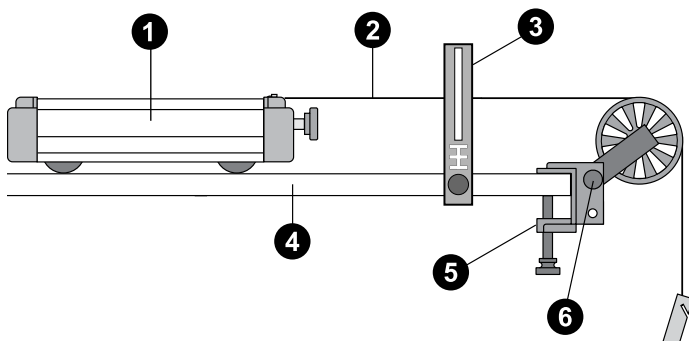


Figure 2. Sample setup for using a PASCO cart with the Super Pulley with Clamp. See below for components.

- ❶ PASCO cart
- ❷ String
- ❸ Elastic Bumper (ME-8998)
- ❹ Track
- ❺ Clamp
- ❻ Super Pulley (ME-9450A)

## Specifications and accessories

Visit the product page at [pasco.com/product/ME-9448B](https://www.pasco.com/product/ME-9448B) to view the specifications and explore accessories. You can also download experiment files and support documents from the product page.

## Experiment files

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