## Ultra Pulley Attachment (Order Code SPA)





This Ultra Pulley Attachment is designed to convert a Vernier photogate into a Smart Pulley. The Ultra Pulley Attachment is connected to the photogate by using the metal rod that came with the photogate. Place the rod through the hole in the photogate and move the pulley into position so that the rod can be threaded into it. Tighten the rod so that the pulley is held firmly against the photogate. When properly positioned, the spokes of the pulley will block the infrared beam of the photogate (Gate 2 of a Go Direct® Photogate) each time they pass by.



Pulley and Go Direct Photogate attached to a pulley bracket (pulley bracket and Go Direct Photogate not included)

Do not allow a cart or weight to strike the pulley. For example, when performing Atwood's machine experiment, catch the rising mass before it hits the pulley, or, when performing the half-Atwood's machine experiment, catch the cart before it contacts the pulley.

The total mass hanging from the Ultra Pulley should be no more than 500 g.

## **Additional Information**

Moment of inertia: 1.16 × 10<sup>-6</sup> kg m<sup>2</sup>
Circumference of inner groove: 0.150 m
Circumference of outer pulley edge: 0.16 m

## Warranty

Vernier warrants this product to be free from defects in materials and workmanship for a period of five years from the date of shipment to the customer. This warranty does not cover damage to the product caused by abuse or improper use.



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Rev. 6/11/2024



