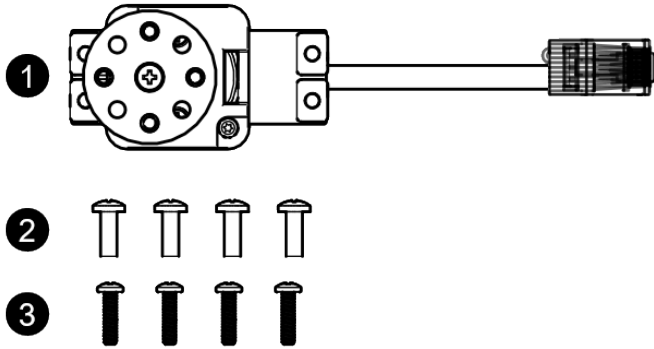


Low Speed Stepper Motor

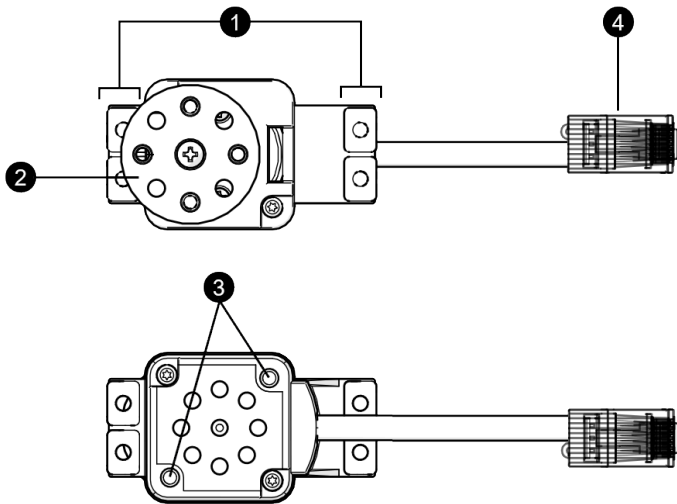
PS-2978

What's included



- 1 Low Speed Stepper Motor
- 2 4× Screws, 6-32×3/8"
Use these screws to attach wheels to the hub.
- 3 4× Screws, 4-40×7/15"
Use these screws to mount the motor to various objects.

Features



- 1. **Mounting holes**
Use these holes to mount the stepper to a variety of objects including the PASCObot body (PS-3318). The holes are spaced the same distance as a standard servo motor.
- 2. **Hub**
The hub includes four threaded holes for attaching the PASCObot Wheels (PS-3319). Each threaded hole accepts a 6-32 screw. You can remove the hub and replace it with any standard servo horn.
- 3. **Threaded mounting holes**
Use these holes to attach a PASCO Rod Clamp to mount the stepper to a support rod. The holes accept 6-32 screws.
- 4. **Plug**
Use to connect the stepper motor to a Power Output port on the //control.Node. Push the plug into the port until you hear a click.

Getting started

Required items

- //control.Node (PS-3232)
 - SPARKvue or PASCO Capstone software
1. Connect the stepper motor to a **Power Out** port on the //control.Node.
 2. Turn on the //control.Node and connect it to SPARKvue or PASCO Capstone.
 3. In the software's **Code** tool, go to the **Hardware** group and drag the **set stepper** block to the workspace.

```

set stepper using units rev/s
for //control.Node :
  configure port A ✓
  rotate stepper through
    angle (rev) 0
    to max ±speed (rev/s) 0
    with acceleration (rev/s²) 0
  configure port B
  Wait for completion
  
```

You can configure block to set the stepper motor to rotate continuously or through a specified angle. The block provides two parameters to control the rotational speed and acceleration. As the stepper rotates, it provides data on its angle and angular velocity. You can view both of these measurements in a data display in the software.

Download an experiment

Download one of several student-ready activities from the PASCO Experiment Library that use the Low Speed Stepper Motor. Experiments include editable student handouts and teacher notes. Go to pasco.com/freelabs/PS-2978 to access the files.

If you want to explore on your own, check out the SPARKvue and PASCO Capstone help guides to search for specific topics.

SPARKvue

Software: Go to the **Main Menu** then select **Help**.

Online: Go to pasco.com/help/sparkvue.

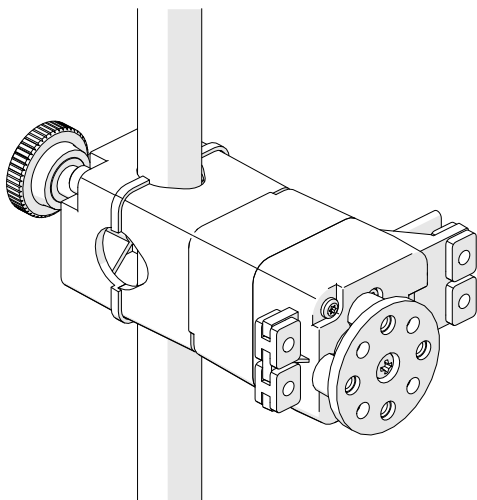
PASCO Capstone

Software: In the menu bar, click **Help** then select **PASCO Capstone Help**.

Online: Go to pasco.com/help/capstone.

Mounting the stepper motor

Use the threaded mounting holes on the bottom of the stepper motor to attach a PASCO Rod Clamp. You can then use the rod clamp to mount the stepper motor to a support rod.



Specifications and accessories

Visit the product page at [pasco.com/product/PS-2978](https://www.pasco.com/product/PS-2978) to view the specifications and explore accessories. You can also find experiment files and support documents on the product page.

Technical Support

Need more help? Our knowledgeable and friendly Technical Support staff is ready to provide assistance with this or any other PASCO product.

Phone (USA)	1-800-772-8700 (Option 4)
Phone (International)	+1 916 462 8384
Online	pasco.com/support

Regulatory information

Warranty, Copyright, and Trademarks

Limited Warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

Copyright

This document is copyrighted with all rights reserved. Permission is granted to non-profit educational institutions for reproduction of any part of this manual, providing the reproductions are used only in their laboratories and classrooms, and are not sold for profit. Reproduction under any other circumstances, without the written consent of PASCO scientific, is prohibited.

Trademarks

PASCO and PASCO scientific are trademarks or registered trademarks of PASCO scientific, in the United States and/or in other countries. All other brands, products, or service names are or may be trademarks or service marks of, and are used to identify, products or services of, their respective owners. For more information visit www.pasco.com/legal.

Product end of life disposal instructions



This electronic product is subject to disposal and recycling regulations that vary by country and region. It is your responsibility to recycle your electronic equipment per your local environmental laws and regulations to ensure that it will be recycled in a manner that protects human health and the environment. To find out where you can drop off your waste equipment for recycling, please contact your local waste recycle or disposal service, or the place where you purchased the product.

The European Union WEEE (Waste Electronic and Electrical Equipment) symbol on the product or its packaging indicates that this product must not be disposed of in a standard waste container.