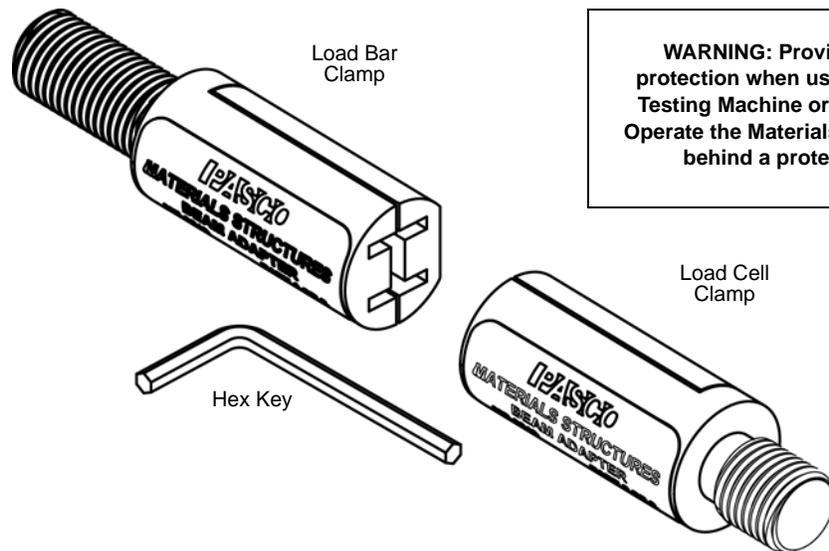


Materials Structures Beam Adapter

ME-8242

For Use with the Materials Testing Machine (ME-8236)



WARNING: Provide proper eye protection when using the Materials Testing Machine or its Accessories. Operate the Materials Testing Machine behind a protective shield.

Included Items
Materials Structures Beam Adapter
Hex Key (allen wrench)

Required Items*
Materials Testing Machine (ME-8236)
PASCO Interface (PASPORT compatible)
PASCO Data Collection Software

*See the PASCO catalog or web site at WWW.PASCO.COM

Recommended Items*
Truss Set Members (ME-6993)
Flat Structures Members (ME-6987)
Structures Cast Beam Set (ME-7009)
Photoelastic I-Beam Set (ME-7011)
Thin I-Beam Set (7012)

Introduction

The Materials Structures Beam Adapter is designed to work with the PASCO Materials Testing Machine (ME-8236), part of the Materials Testing System (ME-8230). The Materials Testing Machine is a device for measuring force and displacement for various materials as the materials are stretched, compressed, sheared, or bent. The Materials Testing Machine has a built-in load cell (strain gauge transducer) capable of measuring up to 4900 newtons (N) of force (1100 pounds), and an optical encoder module that measures displacement of the load bar. Force data from the load cell and displacement data from the encoder module can be recorded, displayed, and analyzed by a PASCO Interface with PASCO Data Acquisition Software. The sensor cable from the Materials Testing Machine connects to a PASPORT input port.

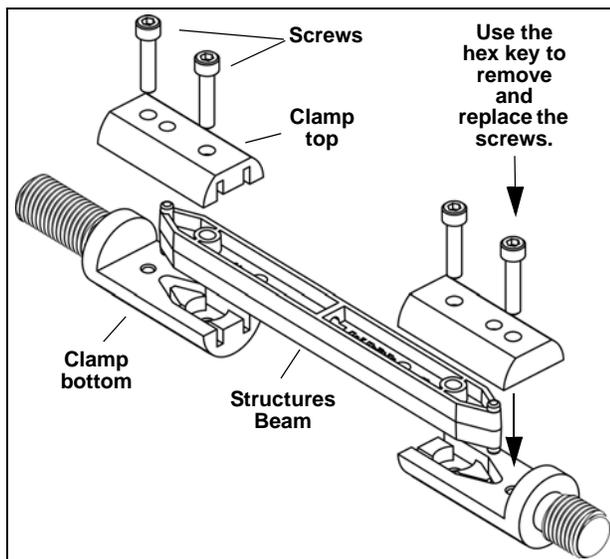
Materials Structures Beam Adapter (ME-8242)

The PASCO Structures System includes a variety of beams that can be used with the Materials Testing Machine. The beams are models of I-beams and other structure elements. The Materials Structure Beam Adapter is designed to hold a structures beam so that it can be tested under tension and compression.

The Materials Structures Beam Adapter consists of two clamps and an included hex key. Each clamp has two jaws, one of which can be removed so that an end of a structures

beam can be put in the clamp. The threaded ends of the two clamps fit in the load bar and load cell of the Materials Testing Machine.

Use the included hex key to remove the screws that hold the two parts of each clamp together. Put the ends of a structures beam, such as a #3 I-Beam, into the bottom part of each clamp, and then use the screws to reattach the top part of each clamp.



Screw the clamp with the short threaded end into the top of the load cell, and put the other clamp through the hole in the load bar. Use the load bar round nut to secure the clamp to the load bar.

Attach the Safety Shields

Attach the two safety shields that come with the Material Testing Machine. Match the Velcro® hook material on the two safety shields to the Velcro® loop material on the front and back of the Load Bar. Adjust the position of the shields so that they will block any fragments that may come from the sample.

Operation

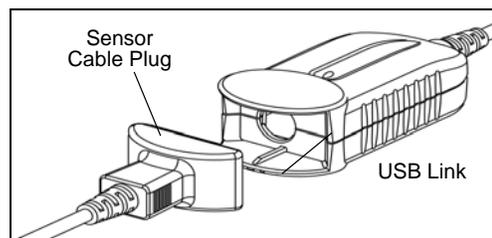
Caution: Be sure to wear adequate eye protection when using the Materials Testing Machine or its accessories. Operate the Machine from behind a protective shield.

Basic operation involves mounting the item to be tested onto the Materials Testing Machine, connecting the Materials Testing Machine sensor cable to an interface for data recording, and then turning the crank.

For example, the Materials Structures Beam Adapter allows a Structures Beam to be tested under tension or compression. Apply a compression force to a beam to observe pillar structure failure.

Prepare to Record Data

Connect the plug on the sensor cable into a PASPORT interface (such as the USB Link PS-2100A).



Turn on the interface and start the PASCO Data Collection Software. Arrange a graph display of force versus position. Use the software to zero the two sensors of the Material Testing Machine.

Experiment Guide

NOTE: An Experiment Guide in electronic format for the Materials Testing System is available to download from www.pasco.com.

Enter "Materials Testing System" in the Search window and look for the down-loadable file(s) under "User Resources".

Other Equipment

Other accessories are available separately for the Material Testing Machine. Please see the PASCO web site at www.pasco.com for more information..

Technical Support

For assistance with any PASCO product, contact PASCO at:

Address: PASCO scientific
10101 Foothills Blvd.
Roseville, CA 95747-7100

Phone: +1 916-462-8384 (worldwide)
800-373-0300 (U.S.)

E-mail: support@pasco.com

For the latest information about the Materials Structures Beam Adapter, the Materials Testing System, or the replacement items and accessories, go to the PASCO web site at www.pasco.com and enter the model number or the model name in the search window.

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