

Harvard Apparatus Isometric and Isotonic Transducers



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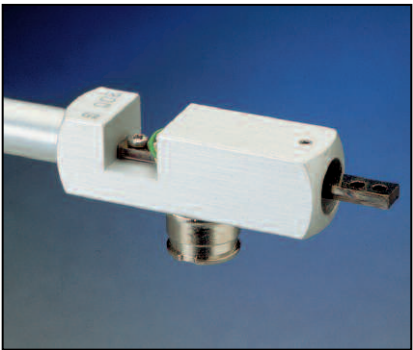
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Harvard Apparatus Isometric Transducers

- Strain gauge type
- Available in five force ranges

Isometric muscle contraction is defined as force with zero motion. Harvard Apparatus Isometric Transducers achieve this condition by means of thinfilm, bonded strain gauges and substantial beams. The strain gauge has four-wire closed Wheatstone bridges for long term stability and sensitivity. The stiffness of the transducer and stem prevents unwanted displacement.

To operate, these Isometric Transducers require power from the amplifier/signal conditioner to which they are connected. They are available in five force ranges and are supplied with an amplifier/signal conditioner specific, 1.8 m (6 ft) Cable. These Cables are also available separately allowing the Transducer to be connected to a different amplifier/signal conditioner simply by switching the Cable.

Specifications

Dimensions:		
Transducer, H x W x D	19 x 150 x 19 mm	(3/4 x 6 x 3/4 in)
Mounting Rod, OD x L	12.5 x 75 mm	(1/2 x 3 in)

Harvard Isometric Transducer for Use With		
Force Range	Harvard Apparatus Amplifiers	Gould Signal Conditioners
0 to 50 g	BS4 50-7905	BS4 50-7911
\$		
0 to 100 g	BS4 50-7913	BS4 50-7912
\$		
0 to 200 g	BS4 50-7921	BS4 50-7914
\$		
0 to 500 g	BS4 50-7939	BS4 50-7915
\$		
0 to 1000 g	BS4 50-7947	BS4 50-7916
\$		
Replacement Cable		
	BS4 50-7988	BS4 50-7990
\$		

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Harvard Apparatus Battery-Powered Isotonic Transducer

This Battery-Powered Isotonic Transducer has an output shaft located in precision bearings, which carries a lever 90 mm (3.5 in) long. This lever is notched on its top surface and pierced with eight holes on either side of the lever point on a 5 mm pitch from the fulcrum. These piercings are for attachment of the preparation.

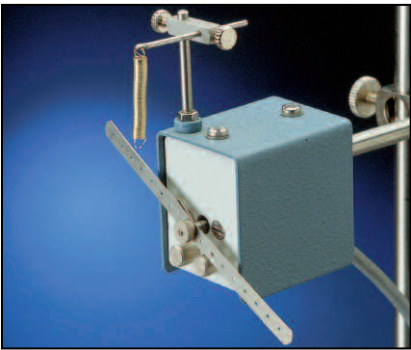
A graduated optical density vane (a light wedge), is also mounted on this shaft and moves between a miniature lamp and a silicon phototransistor which are housed in the light-proof casing.

The output of the photo transistor is linear over approximately 50° of movement of the lever. A balance control is provided on the front of the instrument to zero the output at a convenient level. A long lasting mercury battery is supplied. Output is from a pair of 4 mm sockets on the front panel.

Specifications

Dimensions:	
Case, H x W x D	50 x 100 x 25 mm (2 x 4 x 1 in)
Mounting Rod, OD x L	6.5 x 60 mm (1/4 x 2-1/4 in)

Catalog No.	\$	Product
BS4 50-6378		Battery-Powered Isotonic Transducer
BS4 50-9257		4 mm plugs to BNC Cable; for use with Modular Universal Oscilloscope, see page I66, and Student Oscilloscope, see page I68
BS4 50-6364		Adapter Cable, 4 mm plugs to 14-Pin DIN connector; for use with Gould 6600 Series Amplifiers



Harvard Apparatus Isotonic Transducers

This Harvard Apparatus Isotonic Transducer is exceptionally sensitive and stable, requiring a minimum of force to produce a substantial electrical signal. It uses precision ball bearings and a graduated optical density vane that moves between an infrared source and a sensor.

The notched, pierced input lever is 90 mm (3-1/2 in) long for easy connection to muscle tissue. A spring and anchor post are supplied for converting the unit into a Transducer capable of recording frog/heart muscle tension for auxotonic applications.

This Transducer has a 2 m (6.6 ft) shielded integral cable which terminates in a specific connector for use with one of the amplifiers/signal conditioners below.

Specifications

Output	50 mV/angular degree rotation
Angle of Rotation	±25° above and below horizontal axis
Excitation Voltage	-12, 0, +12 VDC
Breakaway Torque	0.05 g/cm
Dimensions:	
Housing, H x W x D	45 x 35 x 45 mm (1.75 x 1.5 x 1.75 in)
Mounting Rod, OD x L	6.5 x 60 mm (0.25 x 2.5 in)

Catalog No.	\$	Product
BS4 50-6360		Harvard Apparatus Isotonic Transducer for use with BS4 53-6132 Harvard Apparatus Amplifier, BS4 50-7970 and BS4 50-7996 Freestanding Transducer Interfaces, and BS4 50-8861 Modular Transducer Interface

Did you know ?

Harvard Apparatus now owns Hugo Sachs Elektronik. The HSE isolated organ baths set the industry standard. They can be found in the Isolated Organ and Tissue Section K in this Bioscience Catalog.