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Earmuff fit and force test equipment

Description

This equipment facilitates measurement of the adjustability of, and force exerted by, the headband of a pair of earmuffs as fully described in EN 13819-1:2020, and required for testing earmuffs to the EN 352 series, which call up EN 13819-1.



There is a wide range of size adjustment and the settings of 'test height', 'test width' and 'test depth' are directly indicated. Cup articulation up to ±10° from parallel both horizontally and vertically can be assessed.

Included with the equipment are a pair of the specified artificial pinnae and securing screws.

If the indicated force is noted, and a 'print' of the cushion contact area is made and subsequently measured, then the cushion pressure can be derived.

Technical specification

Bench mounted

Supply Voltage and Frequency

These are factory set and connecting the rig to the wrong power supply will permanently damage the unit. Refer to the label on the equipment for the correct supply.

Load Cell Range

0 to 3 kg (0-30N)

Dimensions

Item	Width (mm)	Depth (mm)	Height (mm)	Weight (kg)
Rig	600	250	400	8.5Kg

The rig as supplied includes a helmet mounted earmuff adapter.

Additional items required:

Timer

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Earmuff fit and force test equipment **(continued)**

In order to measure the contact area to calculate applied pressure:

Planimeter, please refer to the separate planimeter specification sheet.
Petroleum jelly
Controlled source of gauging paper

The rig is designed to operate in the conditions specified by the relevant standards listed below. Storage conditions should be restricted to 5 to 35°C and <85%RH.

Relevant standards

The equipment complies with the test equipment specified in the following standards, or the standards called up by them: those parts of the EN352 series which cover earmuffs and EN 13819-1:2020, clauses 4.2, 43, 4.4, and 4.5.