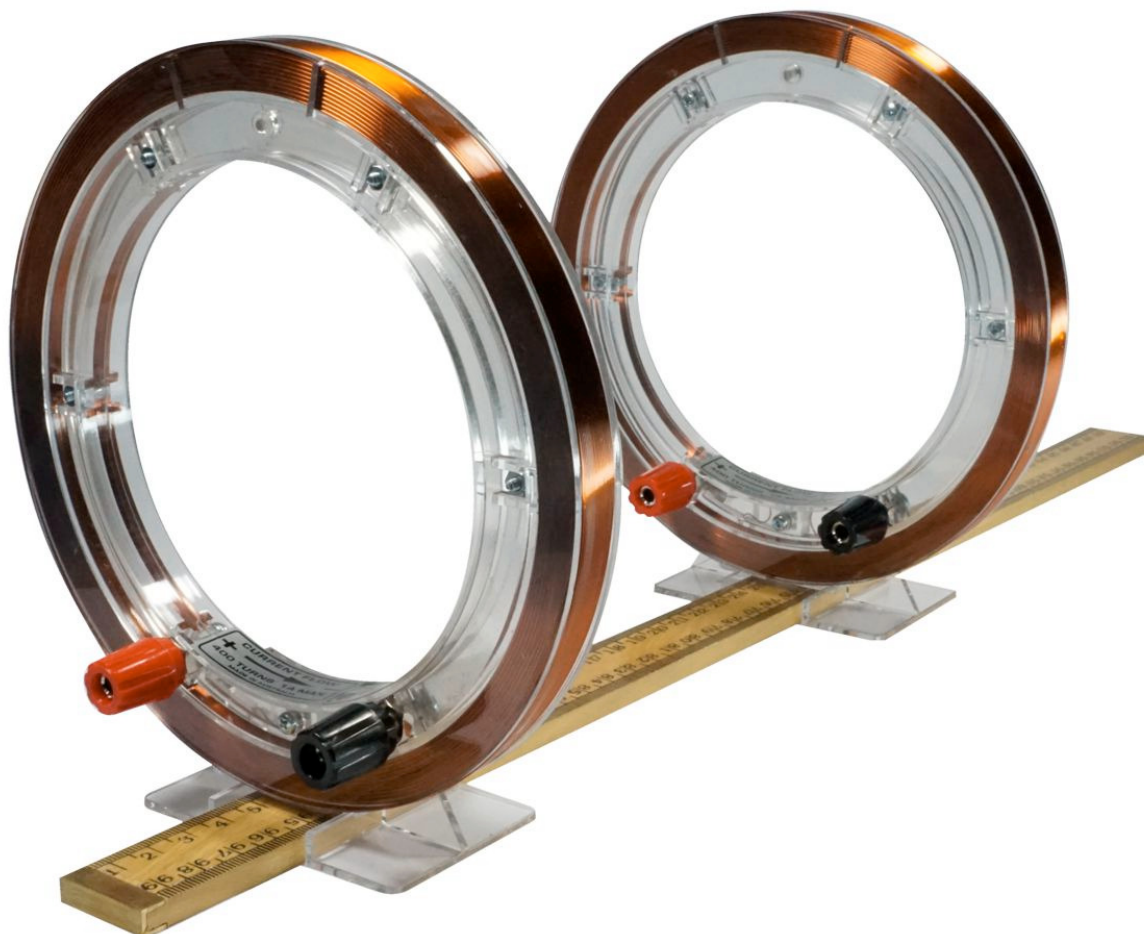


Helmholtz Coils - Pair

400 Turns, 1A. Max



EM1915-001

Description:

Helmholtz Coils are air wound coils of large diameter that can be connected to a power source and which can be aligned on a common axis for the measurements and study of magnetic fields. They are normally used with a magnetic measuring probe (Hall Effect probe PA) and a constant current power source. Both the probe and power supply were manufactured by IEC as part of the Hall Effect kit but are now made only to special order.

Kit Contains:

- 2 pce Large coil, with foot, 400 turns. With 4mm socket head spin free terminals.
- 1 pce Rule, metric, 500mm long. For setting distances between coils.

Average Coil Diameter: 150mm	I.D.: 115mm	O.D.: 163mm	Weight: 840g
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Helmholtz coils are normally connected in series so the current passing through them is the same. The power source for these coils is normally a constant current power supply where the current remains exactly constant even when the coils heat and the resistance rises.

See also EM1915-020 for a coil wound with 50 turns of heavier wire. This is similar shape to a Helmholtz coil but carries a larger current and is used for demonstrating magnetic fields.

Specifications:

Coil Diameter:

Inside: 115mm Outside: 163mm

Average coil diameter:

150mm

Number of turns:

400 per coil

Maximum current:

1 amp

Coil resistance:

Cold: approx 20 ohms Hot: approx 25 ohms

Power source:

So that the heating of the coil does not change the current flowing, use preferably a constant current supply, adjustable from 0 to 1 amp. The maximum voltage required is about 26 volts.

Physical:

Weight: 0.84 kg. For the set of 2x coils and the scale.

Caution:

Wire is wound on a plastic former. Although the plastic is rated for high strength and high temperature, do not overheat. If current of 1 amp is exceeded or if the 1 amp current is permitted to flow for prolonged periods, the coil can become very hot. Always turn off power source or reduce current flow after measurements have been taken.

Spare Parts:

Single Helmholtz Coils can be purchased as PA1915-010

Designed and Manufactured in Australia