

Waltenhofen pendulum 8497500

Instruction sheet

12/06 SP



- 1 Slotted aluminium ring
- 2 Aluminium ring
- 3 Aluminium disc
- 4 Stand rod (not included within the scope of delivery)
- 5 Clamp (not included within the scope of delivery)
- 6 Bearing rod
- 7 Roll axis
- 8 Pendulum rod
- 9 Slotted clamp with knurled screw
- 10 Rectangular aluminium plate

1. Description

The Waltenhofen pendulum is used to demonstrate the working of an eddy current brake and its effect.

A pendulum rod is attached by means of a magnet to a bearing rod. Four different pendulum bodies are provided for the experiments. A heavy rectangular aluminium pendulum disc oscillates between the poles of an electromagnet that is switched off. When the electromagnet is switched on, the oscillating motion of the aluminium disc ceases within a very short time, owing to the magnetic field generated by the electromagnet. If the disc/plate is slotted, then the time required for the oscillating motion to stop is extended, i.e. there is a strong reduction in the braking effect.

2. Scope of delivery

- 1 Pendulum rod with bearing rod and slotted clamp
- 4 Aluminium pendulum discs:
Rectangular plate and slotted rectangular plate
Disc
Ring
Slotted ring

3. Technical data

Rectangular plate:	65 mm x 86 mm, 29 g
Disc:	78 mm \varnothing , 26 g
Ring	70 mm \varnothing , 21 g
Slotted ring:	70 mm \varnothing , 20 g
Pendulum rod:	80 mm x 275 mm, 112 g

3. Experiment set-up

The following apparatus is additionally required for conducting the experiments:

1 Stand base, 150 mm	U13270
1 Stand rod, 750 mm	U15003
1 Universal clamp	U13255
1 Horseshoe magnet, 150 x 130 x 40 mm ³	U8497210
1 Pair of pole pieces, bored	8497200
1 Pair of yokes, 40 x 40 mm ²	8497181
2 Coils, number of turns 1200	8497440
1 DC power supply unit 16 V, 0-2.5 A	8521145

Safety experiment leads

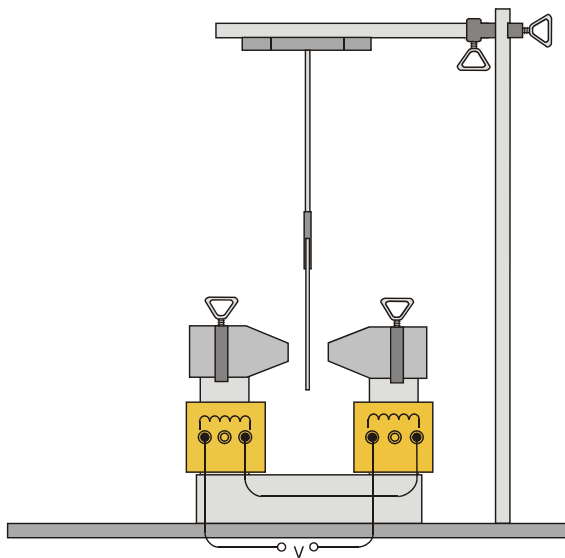


Fig. 1: Experiment set-up of a Waltenhofen pendulum