3B SCIENTIFIC® PHYSICS



Transformer Core D 1000976 Pole Pieces D 1000978

Instruction sheet

06/15 JH



- 1 Transformer core (U-core)
- 2 Yoke (I-core)
- 3 Clamps for clamping the yoke or pole pieces firmly to the core.
- 4 Pair of drilled pole pieces

1. Safety instructions

- Polished surfaces should be kept free of dirt and grease.
- Transformer core, yoke and pole pieces should not be exposed to moisture.
- For transporting the U-core and yoke (I-core), make sure the clamps are firmly secured.
- During the experiment, the yoke or pole pieces should be firmly secured using the clamps.

2. Description, technical data

2.1 Transformer core

The transformer core with yoke and clamps are provided for use in conjunction with the acces-

sories listed under item 4 of the instructions for assembling the demountable transformer.

Transformer core and yoke made of highquality, laminated iron for use in transformers, with two holes drilled for securing pole pieces or yoke with the aid of clamps.

Cross section of core: 40 mm x 40 mm

Height including yoke: 170 mm Width: 150 mm

Material: Laminated iron Weight: 6 kg approx.

- 2.1.1 Scope of delivery
- 1 Transformer core
- 1 Yoke
- 2 Clamps (pair)

2.2 Pair of drilled pole pieces

The pole pieces are required for experiments on electromagnetism where a well-defined air gap is necessary (e.g. Waltenhofen's pendulum or investigations of paramagnetic and diamagnetic samples).

Pole pieces made of soft iron each with one plane and one conical end. The pole pieces have a bore drilled through the middle of them.

Cross section of core: 40 mm x 40 mm

Bore at conical end: 5 mm
Bore at plane end: 12 mm
Material: Soft iron
Weight: 1.7 kg approx.

3. Operation

- The safety instructions for the coils must be observed at all times.
- Mount the primary and secondary coils on the core.
- Lay the polished side of the yoke or pole pieces on top of the U-core.
- · Attach the clamps.
- Firmly secure the yoke or pole pieces with the clamps.

4. Accessories for demountable transformer

Mains coil D @230V 220V	1000987
Mains coil D @115V	1000986
Low Voltage Coil D	1000985
Coil D	1000988
Coil D	1000989
Coil D	1000990
Fusion ring	1000980
High current coil with 5 turns for spot	

welding 1000981

High current coil D for nail fusing experiment

1000984

High voltage coil D including 2 horn shaped electrodes 1000991 Waltenhofen's pendulum 1000993

5. Cleaning, maintenance and storage

- Polished surfaces should be kept free of dirt and grease.
- Store in dry conditions.
- Remove any rust with fine steel wool or sandpaper.

6. Example experiments



Fig.1 Demountable transformer



Fig. 2 Waltenhofen's pendulum



Fig. 3 Spark discharge along hornshaped electrodes