Ideal Transformer

Applications of Coupled Inductors
Transformer Design

I & E Sections inverted on alternate layers
"I" Section
"E" Section
Each individual lamina insulated with lacquer or metal oxide.
Former
Secondaries
Primary
Laminated soft iron core clamped with bolts
Insulating cover

http://www.learnabout-electronics.org/ac_theory/transformers03.php

https://www.altrancorp.com/products/toroidal-power-transformers/

Transformer Reflection

A \quad 1: N \quad B
\quad i_1 \quad + \quad v_1 \quad + \quad i_2
\quad + \quad v_2 \quad + \quad v_{ac}

A \quad 1: N \quad B
\quad i_1 \quad + \quad v_1 \quad + \quad i_{ac}
\quad + \quad v_2

A \quad 1: N \quad B
\quad i_1 \quad + \quad v_1 \quad + \quad i_{ac}
\quad + \quad v_2
Example Circuit Simplification
Equivalent Circuits