Powder Cores
Ferrite Cores
Ferrite Toroids
Ferrite Shapes
Ferrite Pot Cores
Tape Wound Cores

# Learn More about Ferrite Shapes

Please visit the Technical Documents library for the Ferrite Core Catalog. Other reference materials including technical bulletins, application notes and white papers are also available for download.

**E, I Cores**
E cores are less expensive than pot cores, and have the advantage of simple bobbin winding plus easy assembly. E cores do not, however, offer self-shielding. Lamination size E cores are available to fit commercially offered bobbins previously designed to fit the strip stampings of standard lamination sizes. Metric and DIN sizes are also available. E cores can be pressed to different thicknesses, providing a selection of cross-sectional areas. Typical applications for E cores include differential, power and telecom inductors, as well as, broadband, power, converter and inverter transformers.

Bobbins for different cross sections are available. E cores can be mounted in different directions and, if desired, provide a low profile. Printed circuit bobbins are available for low profile mounting.

**EFD Cores**
The industry standard economical flat design of EFD cores offers excellent space utilization for transformers or inductors. The optimized cross-sectional area is ideal for very flat compact transformer applications. EFD cores are ideal for compact transformers and inductor applications

Hardware accessories are available.

**ETD Cores**
ETD cores are an economical choice for transformers or inductors. ETDs offer a round centerpost for minimum winding resistance. Also, dimensions are optimized for power transformer efficiency. Typical applications of ETD cores include differential inductors and power transformers.

Hardware accessories are available.

**EER Cores**
EER cores are an economical choice for transformers and inductors. The round centerpost offers the advantage of a shorter winding path length than the winding around a square centerpost of equal area. Differential inductors and power transformers are typical applications of Magnetics EER cores.

Hardware accessories are available.

**EC Cores**
A cross between a pot core and an E core, EC cores have a round center post that provides a wide opening on each side, and therefore, minimum winding resistance. The long legs support low leakage inductance designs. EC cores are typically used in differential inductor and power transformer applications.

EC cores have standard channels for clamping assemblies. Plain bobbins, printed circuit bobbins and clamps are available for most sizes.

**U, I, UR Cores**
U shape cores are ideal for higher power operation in tight spaces or unusual form factors. The long legs of a U core support low leakage inductance designs and facilitate superior voltage isolation. U/I combinations facilitate economical assembly. U cores are ideal for power transformer applications.

**Planar E, I Cores**
Planar E cores are offered in all of the IEC standard sizes, as well as a number of other sizes. The leg length and window height (B and D dimensions) are adjustable for specific

applications without new tooling. This permits the designer to adjust the final core specification to exactly accommodate the planar conductor stack height, with no wasted space. I-cores are also offered standard, permitting further flexibility in design. E-I planar combinations are useful to allow practical face bonding in high volume assembly, and for making gapped inductor cores where fringing losses must be carefully considered due to the planar construction. Differential inductors and DCDC, ACDC converter are typical applications for planar cores.

Clips are available in many cases, which is especially useful for prototyping.

**ER Cores**

ER cores are a cross between E cores and pot cores. The round centerpost of the ER core offers minimal winding resistance. In addition, they offer better space utilization and shielding than with rectangular center leg planar cores. When compared with non-planar cores, ERs offer minimal height and better thermal performance. Typical applications of ER cores include differential inductors and power transformers.

E/I combinations facilitate economical assembly. Surface mount accessories are available.