Dear Customer,

I founded F.E.E.M. in 1996 after ten years' experience in power electronics, realizing the expressed needs of this market for the production of magnetic components.

In subsequent years I have invested in the organization implementing the design department exclusively to electromagnetic components. This choice has made productivity gains by acquiring more and more customers among which the most important companies in the world operating in the sectors: civil and industrial power electronics, automotive, railway, military, naval, renewable energy, electric motors and components.

"My philosophy of life is not to give up in front of any goal", the same one that I sent to my company facing new challenges with commitment and professionalism of the market.

Benedetto Astelfò
OUR WORK
We design and produce transformers and inductors operating in power electronics applications at frequencies from 50 Hz to 500 kHz.

DESIGN & SERVICES
F.E.EM. offers the following services:
- Complete electromagnetic design, prototyping and components production
- Production of custom electromagnetic components based on customer's specification
- Design and production of cabinets related to electromagnetic components
- Electromagnetic products trading

ORGANIZATION, QUALITY & COMPANY METHODOLOGY
Our team checks the technical requirements for the realization of each product from the electromagnetic calculation and the design of the mechanical parts. The business organization is structured according to the ISO certification guidelines, for monitoring the quality and documentation of business processes (from technical department, purchasing, production and commercial and administrative management) to ensure the traceability of components, maximize the effectiveness of each stage in the management of the order.

OFFICER R&D
R & D manager, in accordance to the company philosophy, has matured during last 20 years of collaboration with F.E.EM. lot of experience thanks to his dedication to work and the masters obtained at KG Magnetics USA directed by Prof. McLyman and others achieved in the USA. The insertion of new engineers has provided a more complete service for every customer request.
PRODUCTION

We grow with the most common systems, such as KAN–BAN and BUFFER STOCK, adapting them to the needs of each customer. Headquartered in Varazze (IT) handles all special products, great power items and prototyping. The plant in Bulgaria manages the production of all small-sized components for massive productions and is connected to our headquarters by raw materials and finished items direct flows.

COLLABORATIONS

F.E.EM. actually co-operates with many customers; among the most popular: ABB, DANIELI AUTOMATION, GENERAL ELECTRIC, MITSUBISHI Electric, LEONARDO and ST Microelectronics.

COMMERCIAL

Our commercial agent are present in:
- Italy
- Germany
- Austria
- Switzerland
- Spain
- Portugal
- Poland
- Russia
- Ukraine
- Brasil
- Bulgaria
- France
- Belgium
- Holland
3D modeling

3D MODEL & INSTRUMENTS
WHY FLAT WINDING TECHNIQUE IS A CHEAPER?

Flat winding coil use up to 40% less of the winding area, it involves also less core material, lower dimensions and less weight.

Its semi quasi planar structure aids to fit much better the space.
Using flat winding technique:

- LOWER DC RESISTANCE (DCR)
- LOWER AC RESISTANCE (SKIN EFFECT LOSS)
- HIGHER INDUCTANCE
- LOWER VOLTAGE TURN TO TURN
- HEAT REDUCTION

The flat winding coils are capable of handling high DC bias current, high energy storage and high energy swing due to higher mass and higher saturation flux densities of the core used.

APPLICATION:
- Industrial High Current Filter Inductors
- Switching Regulation Inductors
- In-Line Noise Filter
- Differential Mode Chike
- Boost Power Factor Correction Choke and Welding Machine Output Inductor
OUR STANDARD PRODUCTS
<table>
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<tr>
<th>PART NUMBER</th>
<th>INDUCTANCE AT NO LOAD (µH)</th>
<th>INDUCTANCE AT THE RATED CURRENT (µH)</th>
<th>RATED CURRENT</th>
<th>DCR (mΩ)</th>
<th>DIMENSION WxHxD (mm)</th>
<th>CORE MATERIAL</th>
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SPECIAL FLAT WINDINGS FOR DC BRUSHLESS MOTORS
**SPECIAL WINDINGS FOR BIG BRUSHLESS MOTORS**

F.E.EM. has developed a new revolutionary flat coil suitable for brushless electric motors, power range up to 1 MW, 25% size reduction, 25% weight reduction, 15% cost reduction.

The cross section area of the conductor rise up to 100 mm², the available width up to 50 mm and the thickness from 1,9 up to 3,2 mm.
UP TO 20% LOWER COST

UP TO 50% SMALLER AND LIGHTER

UP TO 98% HIGHER EFFICIENCY

NAKED WINDING
INSULATED WINDINGS
DIFFERENT SIZES FOR BRUSHLESS MOTORS
50 Hz - 400 Hz INDUCTIVE COMPONENTS
(liquid cooled components included)
(*available catalogue)

HIGH FREQUENCY INDUCTIVE COMPONENTS
(liquid cooled components included)
(*available catalogue)

OTHER PRODUCTIONS