



**Welcome to the
company presentation**

Myrra S.A.S.

27. June 2012

M yrra W elcome



Transformers, Inductors, Chokes and Coils

History



Founded in Paris, **1949**

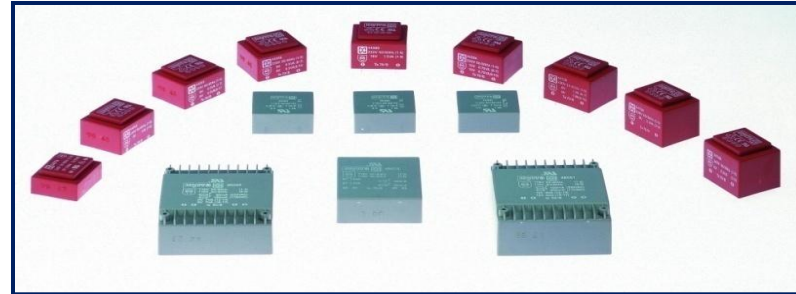
as a local transformer manufacturing company

MYRRA has developed into one of the leading, major names in the field of TRANSFORMERS and WOUND MAGNETIC technologies.

Working with major blue chip, household organization & Industries supplying globally to over 50 countries via OEM relationships, EMS and DISTRIBUTION

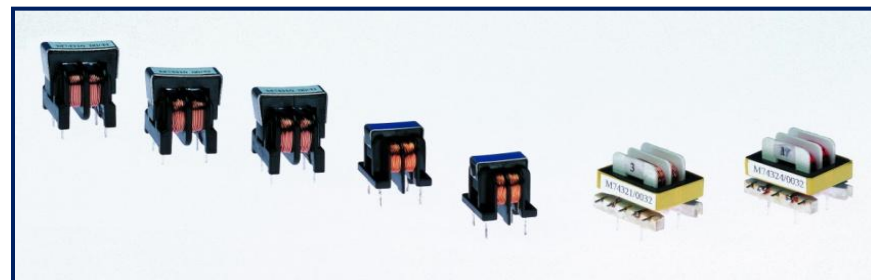


1987 – production based in France, MYRRA enter the encapsulated transformer market. Increasing volume manufacturing of encapsulated transformers (both EI & UI)



1995 – MYRRA expansion by acquisition of a transformer manufacturing facility in Poland : creation of MYRRA Polska

1999 – Further expansion as MYRRA enter a joint venture arrangement for the production of flyback transformers and ferrite transformers and chokes.



2000 – Present Management buy out from group. Private ownership established. Mr Georges Gener becomes 51% shareholder.

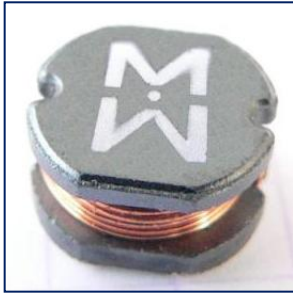


2002 – New stocking warehouse in Spain with distribution facilities.

2004 – Manufacturing plant in China is acquired 100% and MYRRA Zhongshan is created for the manufacture of encapsulated, industrial and ferrite transformers



2005 – Production in France moves to Poland and China



2007- Manufacturing capabilities expanded include SMD magnetic components and telecommunications windings

2008 – Continuous developments developing R&D, sampling services, investment in automated production, introduction of new market leading products

2009 – 2012 – MYRRA:

- ✓ Product expansion & available capacity
- ✓ Targeting growth by providing increased flexibility and value
- ✓ reinforcement of factories' autonomy

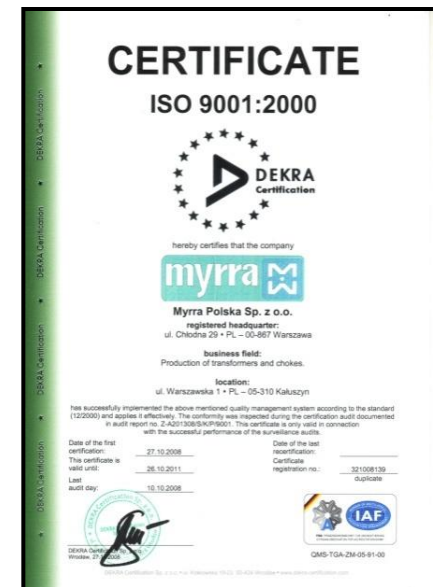
- ✓ new companies :
- ✓ Myrra UK 2009
- ✓ Myrra Germany / Myrra Tunisia / Myrra Turkey 2011

Manufacturing Facilities



MYRRA has production sites well located in Europe and Asia in order to serve diverse market sectors and global supplies.

- MYRRA POWER in Poland (Warszawa):
- MYRRA CHINA (Zhongshan):



Both sites are ISO 9001:2008 approved
Myrra Zhongshan ISO 14001:2004 approved.
SGS approved

MYRRA POWER in POLAND (Warszawa):

- 90 employees
- 2600m² surface area
- Priority Power industrial transformers
- Molded transformers for PCB
- Fast flexible local supplies to Europe



MYRRA Zhongshan in CHINA:

- 350 employees
- 5400m² surface area
- Transformers & chokes 50Hz & HF for SMPS
- ISO9001 - 14001 - certified
- UL 1446 recognized



Quality management



MYRRA has made significant investments in the development of our own Quality Department and Control systems:

Homologations:

- EN61558-1, EN61558-2-6
- EN60950
- ENEC10
- UL5085-1, UL5085-2, UL5085-3
- CSA 22-2 N°66-1, CSA 22-2 N°66-2, CSA N°66-3
- VDE 0570
- UL class B, F & H



- Our production sites have a quality insurance contract with our customers
- Quality Coordination Manager in H.Q. France
- Quality Team in each production plant
- Respect of International standard UL VDE
- ENEC on encapsulated transformers



MYRRA your Worldwide partner....



MYRRA FRANCE

Head Quarter

77600 Bussy St Georges

Sales Office France – Export

- Direct Sales & Distribution
- Technical Support – Design
- R&D Management
- Quality Management
- Finances Group Dept
- Logistic – warehouse
- System HQ & Group

MYRRA POWER in POLAND - Kaluszyn

- Manufacture of High Power Transformers & Inductors
- & standard range Trafo 50Hz
- 90 Employees
- 2600 m²
- Sales Office

MYRRA ZHONGSHAN

- Manufacture of 50Hz and HF transformers
- And inductors
- Technical support
- 350 Employees
- 5400 m²

Sales Office in Hong Kong

MYRRA SPAIN

- Sales Office in Barcelona
- Logistic Services

MYRRA Germany

- Sales office in Baden Württemberg

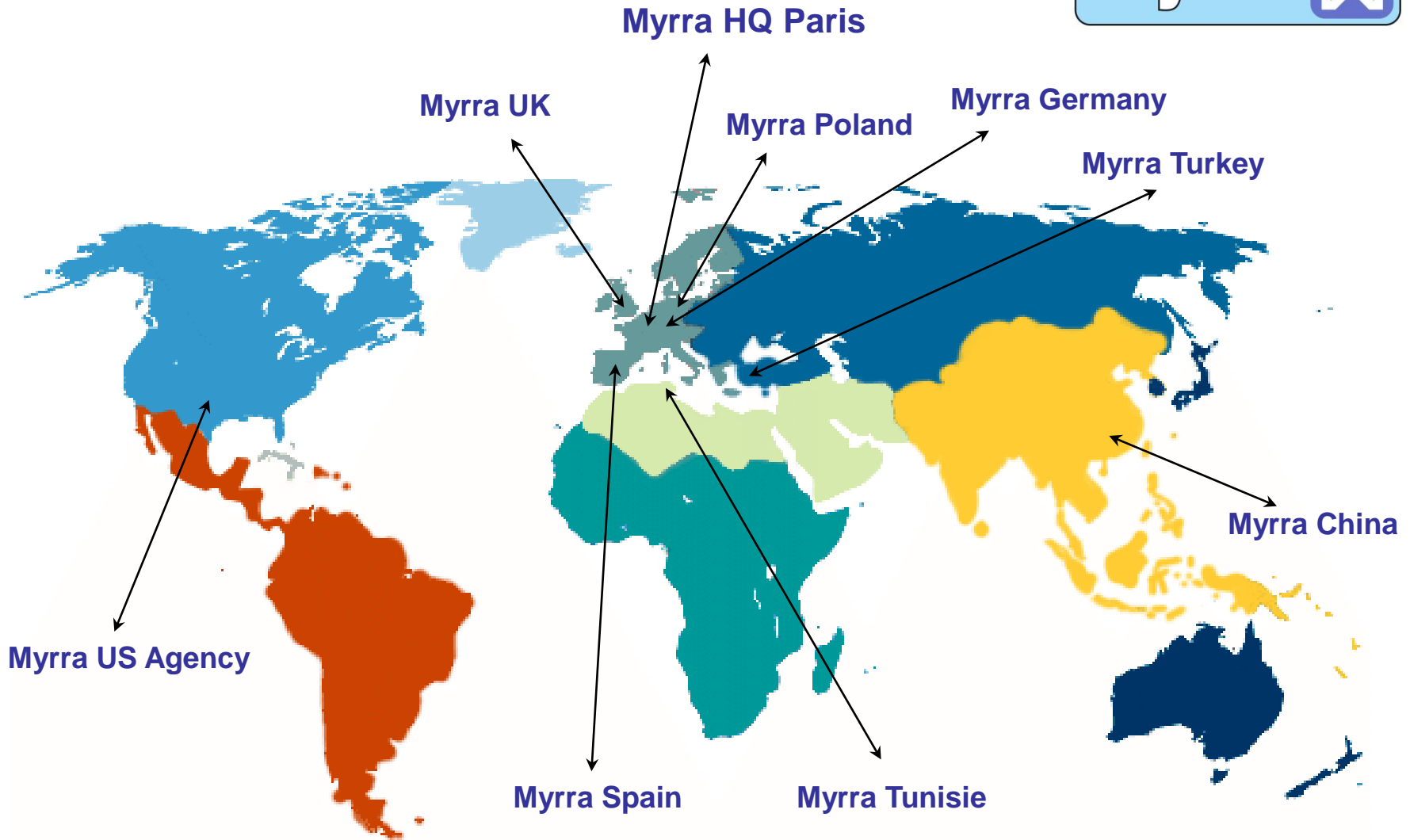
MYRRA Tunisia

- Sales office in Tunis

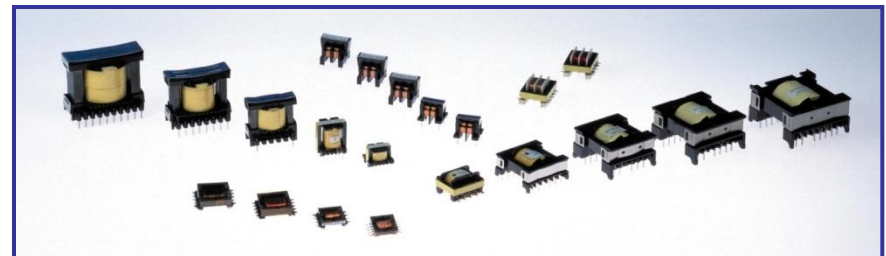
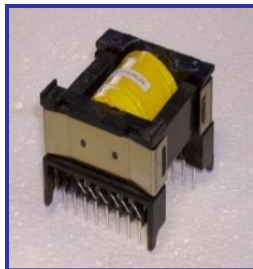
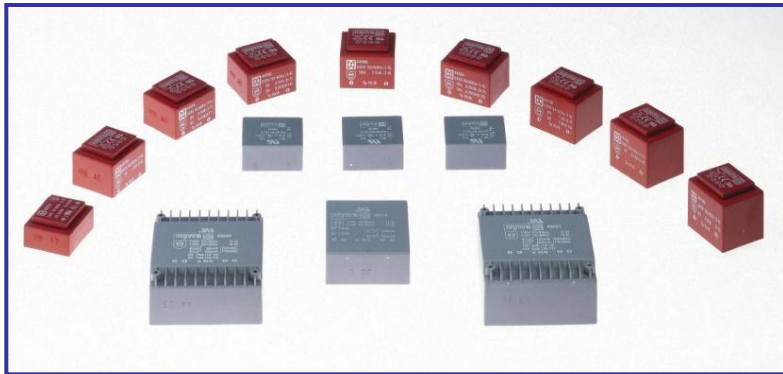
MYRRA Turkey

- Sales office in Istanbul

Locations



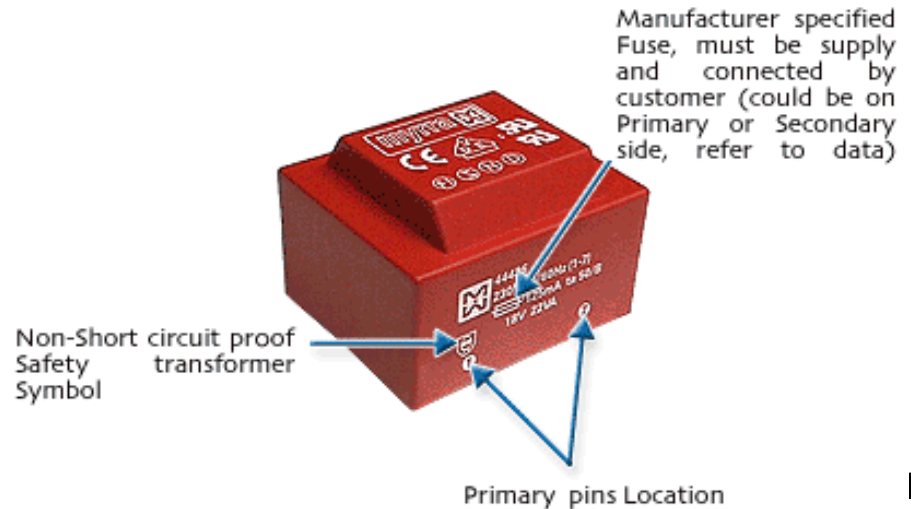
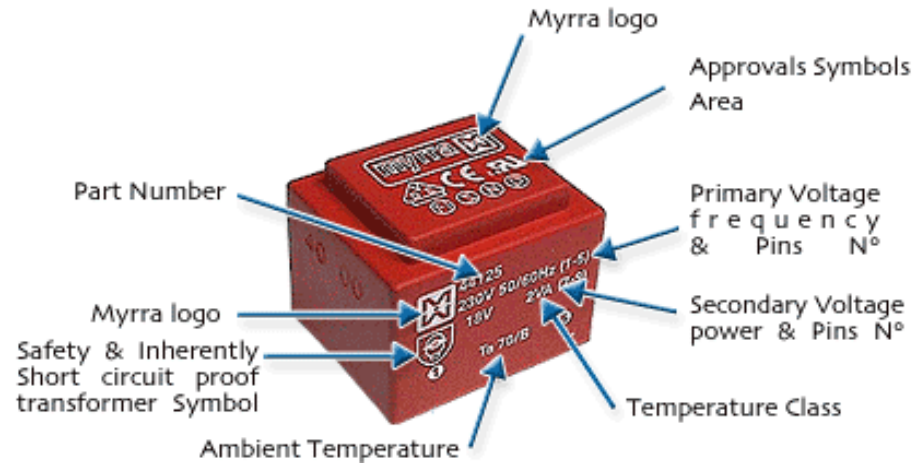
MYRRA Manufacturer of transformers and chokes



MYRRA Core Business

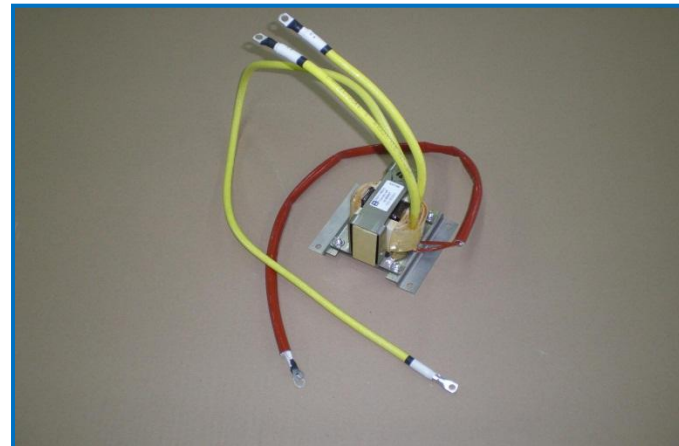
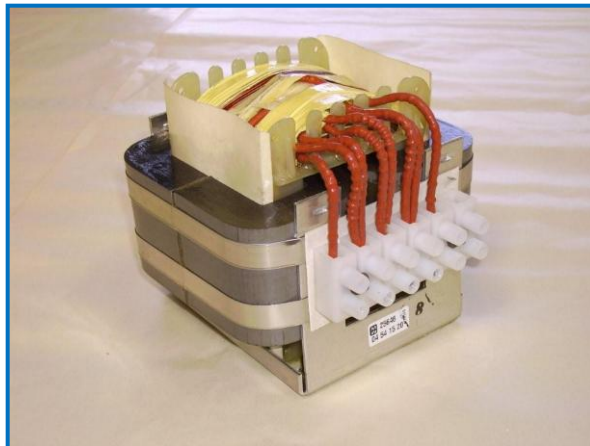
- 50Hz encapsulated and industrial transformers
- Flyback & ferrite transformers for Switch Mode Power Supply

MYRRA leader in encapsulated transformers



MYRRA Power

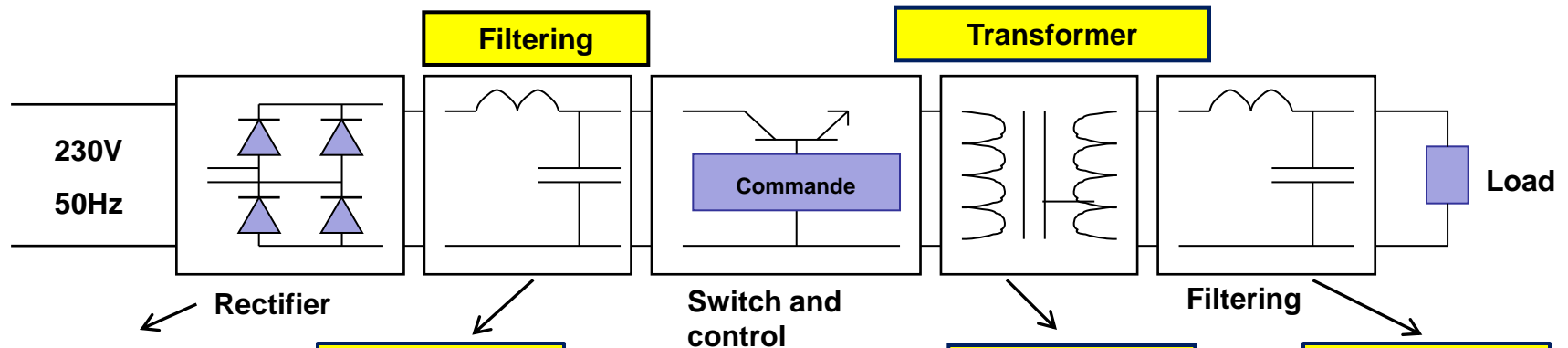
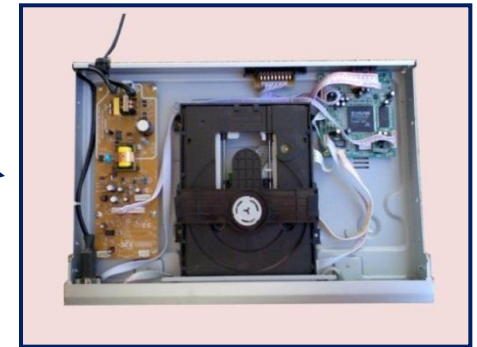
- High power transformers and chokes
- For industry, converters, drivers, medical appliances...
- Lamination and ferrite cores
- Customized products
- Up to 20kVA, up to 1000V input range



Complete Magnetic components solution



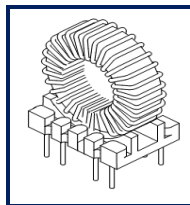
Typical Electrical product (DVD Player) containing an internal switch mode power supply



Common Mode Chokes
74300



PFC Chokes
74200
74220



Control Circuits
Myrra Cross reference list

Flyback Transformers
74000 series



Drum core Chokes
74450



Global Range

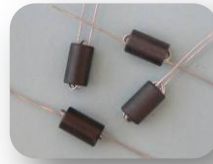


50/60Hz PCB Mount Transformers – EI Range	Size EI30 to EI66 – 1 or 2 secondaries Output Power 0.5 to 30VA Output voltage 6V to 2x24V	44000 Series
50/60Hz PCB Mount Transformers – UI Range	Size UI21 to UI48 – 2 primaries/2 secondaries - Flat type Output Power 0.8 to 60VA Output voltage 6V to 2x24V	45000 Series
50/60Hz Transformers – EI Range	Size catalogue EI38 to EI96 custom up to EI240 Output Power 3.2 to 240VA Faston connexions (FLC) or Wires connexions (FLF)	30000 Series
50/60Hz Toroidal Transformers	Output Power 20 to 250 VA	60000 Series
Power Ferrite Transformers	For Switch Mode Power Supplies (buck / flyback / forward) Size E5 E13 E16 to ETD44-E65 Output Power up to 200W	74000 Series
Common Mode Chokes	For EMI filtering 1mH to 100 mH - 0.0 to 50A	74300 Series
Current Transformers	Thru-hole Primary or Pins primary for PCB mount Primary current up to 250A For Mains AC current measurement (50to400Hz) or for Switch Mode Power Supplies (20-150Hz) Rogowski coils for AC current measurement	74500 Series 74590 Series
Toroidal Chokes	For DC/DC conversion, storage, filtering 1.5µH to 1000µH - 0.5 to 15A For Light Dimmers EMI suppression 100w to 4500w	74100 Series 74190 Series
Power Factor Correction Chokes	Passive Harmonics reduction -100 to 300W (lamination) Active PFC - 50 to 1000W (ferrite)	74200 Series 74220 Series
Pulse Transformers	For Mosfet or IGBT control , SCR triggering, DC/DC conversion	74600 Series
Line coupling Transformers	For Telephone Line coupling (600 Ohms) For Power Line coupling	74700 Series 74710 Series

Through Holes Chokes 78000 – 79000 series



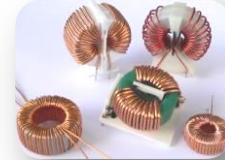
Drum Cores



Wide Band Chokes



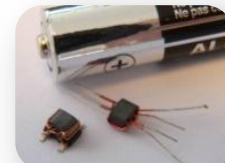
Rod Chokes



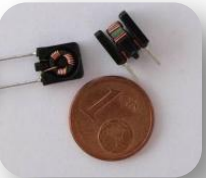
Common Mode Toroids



Axial Inductors



Balun Coils



Toroid Coils Filters



Spring Coils Chokes

Surface Mount Chokes 75000 – 77000 series



Power Inductors



Multilayer Chip Inductors



Shielded Power Inductors



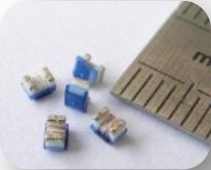
Wound Common Mode Chip



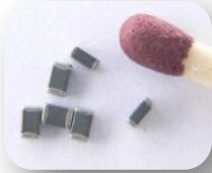
Molded Wound Power Inductors



Surface Mount Beads



Wound Chip Inductors

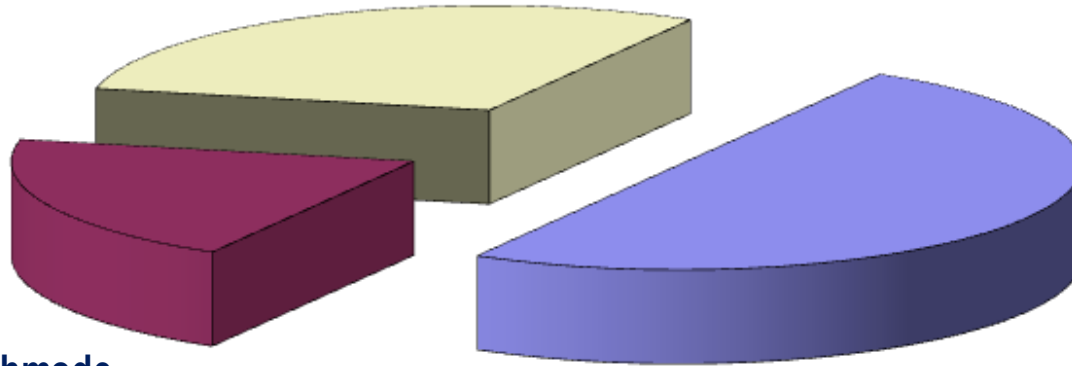


Multilayer Chip Beads

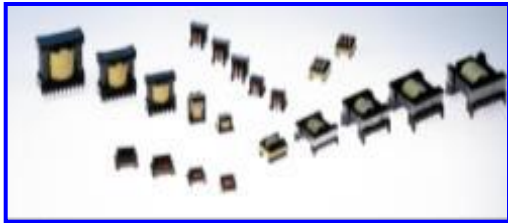
PRODUCT DISTRIBUTION



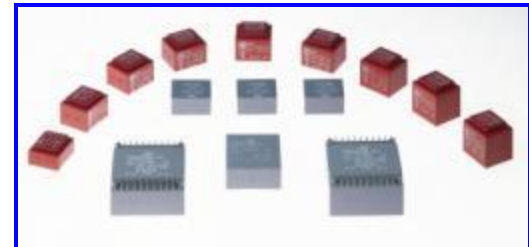
50Hz Industrial, Inductors high power ferrite and DC coils
28%



Ferrite & switchmode
29%



Encapsulated Transformers
43%



An important point in the company Myrra



**Development of new Products
after the market requirements!**

For example:

**EI30 SIZE POWER SUPPLY
ELECTRONIC TRANSFORMER**

EI30 SIZE POWER SUPPLY – ELECTRONIC TRANSFORMER



ALTERNATIVE TO LINEAR TRANSFORMER

- AC/DC applications up to 5 w
- SMPS based on Flyback topology
- Same footprint as EI30 transformer
- extended functions without redesign
- Regulated or not regulated DC Output
- One or two outputs



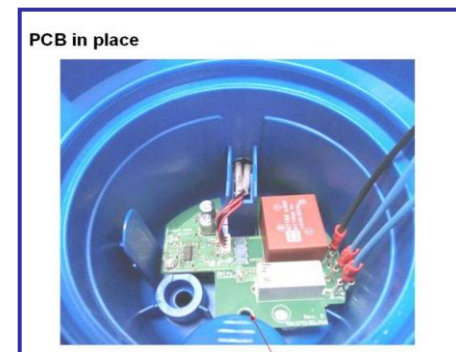
FEATURES AND ADVANTAGES

- Wide input Voltage : 85 to 265V
- Increased Power : x 3
- Better energetic efficiency : 70%
- Energy saving : meets requirement of ENERGY STAR or ECCC

CONFORM TO SAFETY AND EMC STANDARDS

UL VDE for range 2 – One output non regulated

UL VDE in process for other ranges



MYRRA Zhongshan

CHINA



Zhongshan



Myrra Electronic Co., Ltd.



Myrra Zhongshan Manufacturing

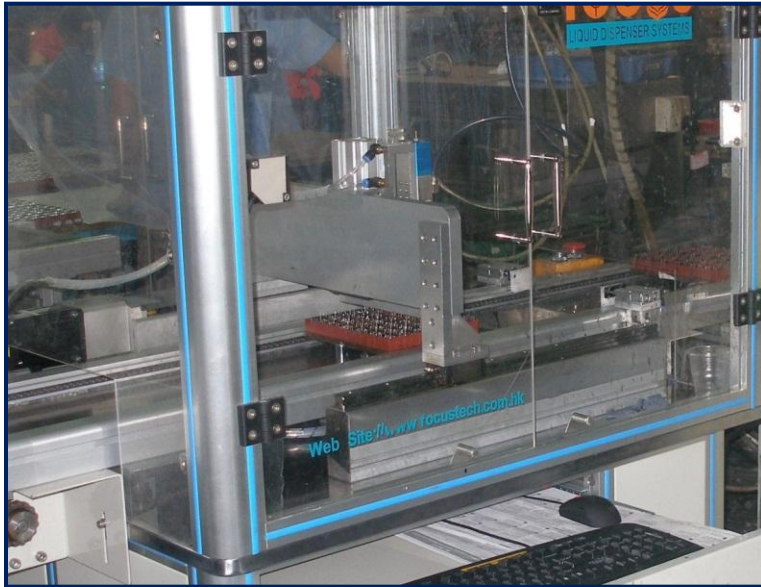


- **5400 SQM Production Area**
- **Over 350 Operators**
- **Weekly Production Capacity: Over 1Mio Pcs**
- **Production of Transformers and inductors 50Hz - HF- Power**

Myrra Zhongshan Manufacturing



Myrra Zhongshan Manufacturing



Myrra Zhongshan Manufacturing



Myrra Zhongshan Manufacturing



Quality management

- ✓ ISO 9001 : 2000 registered by CQC since 2007
- ✓ ISO 14000: 2004 registered by CQC since 2012
- ✓ ROHS REACH compliant
- ✓ certifications for standard components, UL, VDE, CE
- ✓ Quality coordination,
- ✓ Manager in France HQ,
- ✓ quality teams in factories

- ✓ Process Sampling – pilot batches – series
- ✓ 100% quality control
- ✓ Product Reliability
- ✓ Tracability

Myrra Polska Manufacturing



Myrra Polska

Production Lines



Encapsulated line

All our goods are tested at 100%

Myrra Polska

Production Lines



Specific line

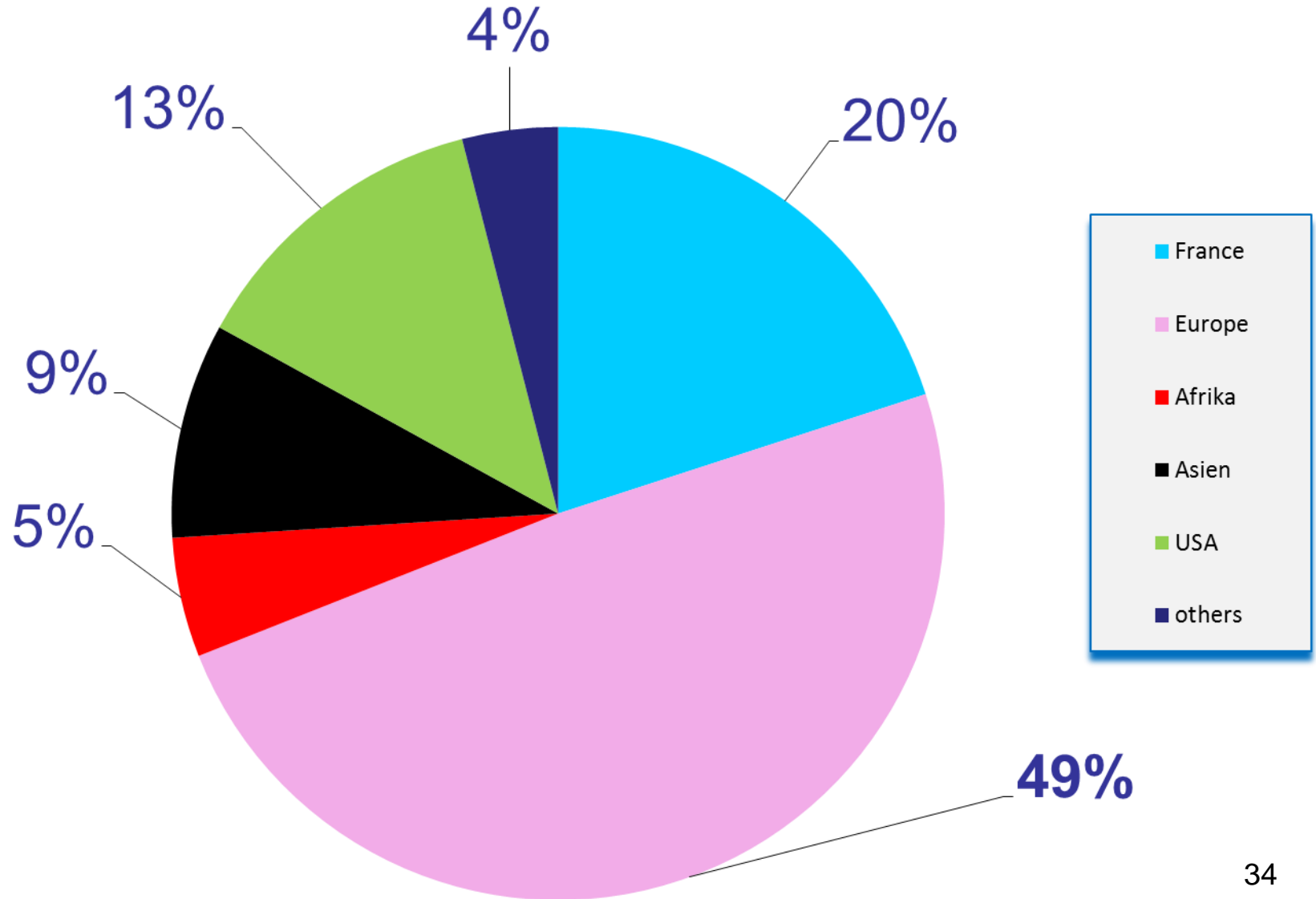
Myrra Polska

Quality management

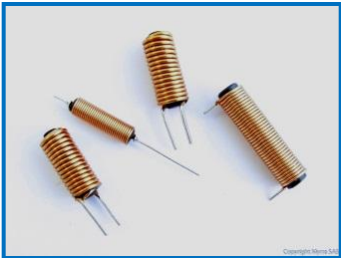
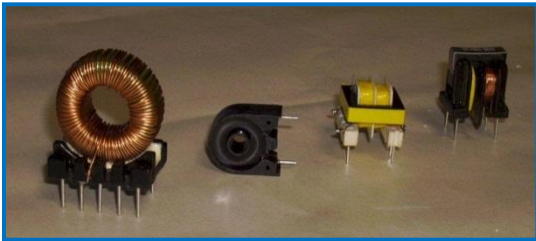
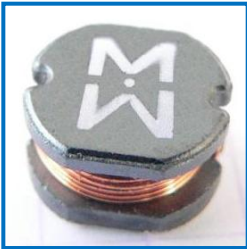
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Sales Breakdown by country



Product Catalog, Sample Box, Pictures, etc.



Myrra Welcome



Thank you for your attention!