INNOVATIVE ECONOMY
NATIONAL STRATEGIC
REFERENCE FRAMEWORK

MAGNETO®

EUROPEAN UNION
EUROPEAN REGIONAL
DEVELOPMENT FOUND

Project title "Industrial research on new producing method of nanocrystalline stacked cores"
co-funded from European Regional Development Found
under Innovative Economy Programme
Project number UDA-POIG.01.04.00-24-004/10-00

# ~~PROTOTYPE~~ / PRODUCT DATA SHEET

## 1. Name of the ~~prototype~~ / product*

**NANOCRYSTALLINE BLOCK CORE**

## 2. Producer of the ~~prototype~~ / product*

**MAGNETO LTD.**

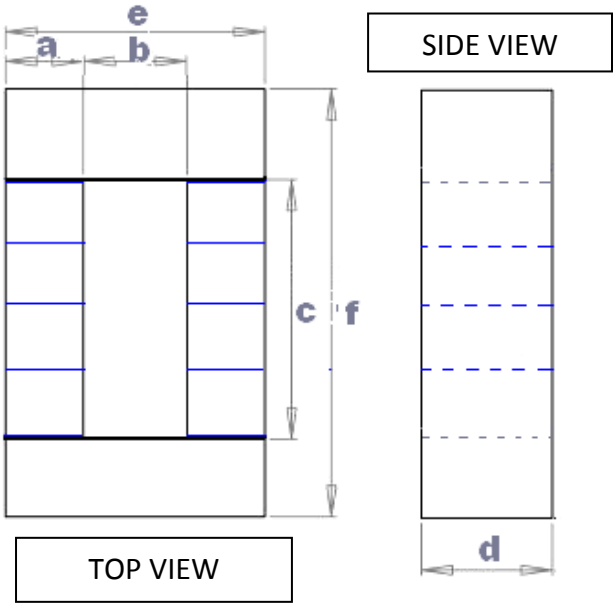
## 3. Description of the ~~prototype~~ / product*

| DIMENSIONS (mm) | COLUMN WIDTH (a) | WINDOW WIDTH (b) | WINDOW LENGTH (c) | HEIGHT (d) | WIDTH (e) | LENGTH (f) | MASS (kg) |
|---|---|---|---|---|---|---|---|
| **Core dimensions:** | 30 mm | 40 mm | 105 mm | 85 mm | 100 mm | 165 mm | 7 |
| Tolerance (mm) | ±0.2 | ±0.2 | ±0.2 | ±0.2 | ±0.2 | ±0.2 | ±2% |
| **Coated core dimensions:** | 32mm | 39mm | 104.5mm | 89mm | 103 | 168mm | |
| Tolerance (mm) | ±0.5 | ±0.5 | ±0.5 | ±0.5 | ±0.5 | ±0.5 | |

| Construction specification | Stack factor | Magnetic path length (lm) | Cross section (Ac) | Window area (Wa) | Core area (Ap) |
|---|---|---|---|---|---|
| | % | cm | $cm^2$ | $cm^2$ | $cm^2$ |
| | 80 | 14.13 | 20.4 | 42 | 123 |
| Tolerance | ±2% | NOM. | NOM. | NOM. | NOM. |

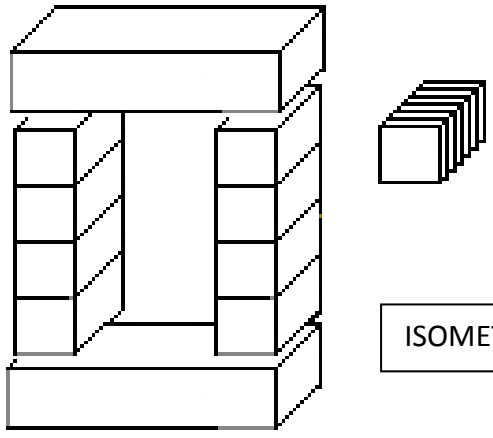
| Test specification | POWER LOSS at 50Hz, 0.3T |
|---|---|
| | < 0.5W |
| Tolerance | Max. |

## 4. Visualization of the ~~prototype~~ / product*




SIDE VIEW

TOP VIEW

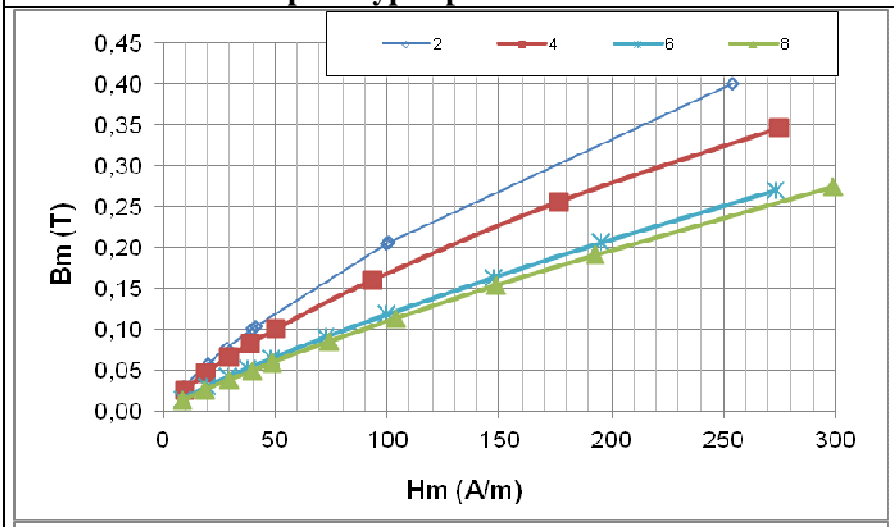


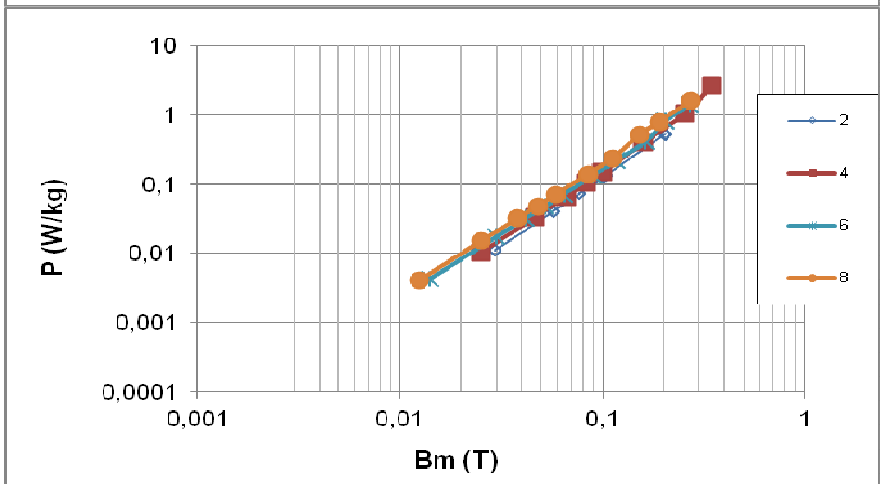
ISOMETRIC VIEW

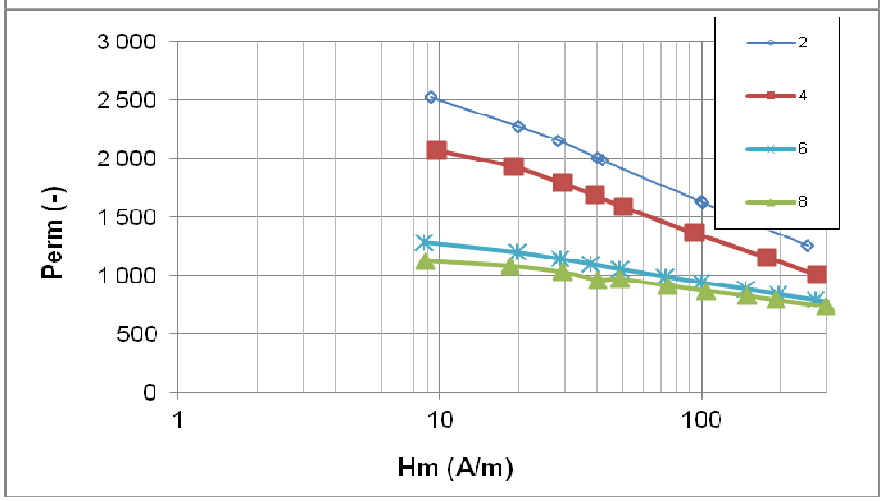
## 5. Potential customers for the ~~prototype~~ / product*

Potential customers are manufacturers of electronics and power electronics components and devices.

## 6. Innovation of the ~~prototype~~ / product*




**Magnetic properties of nanocrystalline magnetic block core (NMBC) with different blocks number:**
a) magnetic induction B,
b) power loss level P,
c) relative magnetic permeability $\mu_r$.

* - cross through as applicable