

## Nanocrystalline MagAmp cores

MagAmp output regulation is certainly not one of the latest technologies, however still one of the most reliable, especially for low-voltage - high-current outputs. Materials have been permalloy tape-wound cores in the good old days, later amorphous Co-based cores. The latest offering for MagAmps are nanocrystalline Fe-based cores, e.g. from VACUUMSCHMELZE GmbH & Co. KG (VITROPERM®).



Nanocrystalline cores feature somewhat higher losses plus a somewhat higher dead time compared with amorphous Co-based cores. They are however less expensive, and offer worry-free utilization without aging effects up to 120°C and more.

Standard types and technical data:

PN	Nominal dimension	Max. dimension (incl. finish)	Effective cross section	Mean path length	Core weight	Saturation flux density		effect. Winding space	Mean Cu length	Heat transfer factor	core area factor
T60006-	$d_a \times d_i \times h$	$D_a \times D_i \times H$	$A_{Fe}$	$l_{Fe}$	$m_{Fe}$	(25°C)	(90°C)	$A_c$	$l_{Cu}$	$R_{th}$	$W_a A_c$
	$mm^3$	$mm^3$	$cm^2$	$cm$	$g$	$\mu WB$	$\mu WB$	$cm^2$	$cm$	$K/W$	$cm^4$
L2010-W759	10 x 7 x 4.5	11,7 x 5,5 x 6,1	0,054	2,67	1,1	12,7	11,9	0,059	2,27	57	0,013
L2012-W761	12 x 8 x 4.5	14,1 x 6,6 x 6,3	0,072	3,14	1,7	16,9	15,8	0,085	2,53	46	0,025
L2016-W763	16 x 10 x 6	18 x 8 x 8,1	0,144	4,08	4,3	33,8	31,7	0,124	3,25	34	0,072
L2017-W765	17.5 x 12.5 x 6	19,1 x 10,9 x 8,1	0,12	4,71	4,2	28,8	26,4	0,231	3,3	30	0,112
L2020-W768	20 x 12.5 x 8	22,6 x 10,3 x 10,2	0,24	5,11	9	56,4	52,8	0,206	4,08	26	0,2

SEKELS GmbH is an official stocking distributor of VACUUMSCHMELZE GmbH & Co. KG. We offer a range of MagAmp cores which are suitable for most output requirements. Please ask for further sizes. Additionally we stock "classic" amorphous Co-based cores for highest performance.

For more information about MagAmps see [www.sekels.com](http://www.sekels.com)



## About VACUUMSCHMELZE GmbH & Co. KG (VAC)

VAC is a world leader in magnetic materials and products with production sites in Europe and Asia. VAC's facility for amorphous and nanocrystalline strip material and cores is the largest in Europe.

The development of amorphous alloys and their production methods started in 1976, with the first product brochure being published in 1979. The first amorphous MagAmp cores, based on a patented Co-based alloy, have been introduced in 1980.

VAC is market and technology leader in Europe with amorphous and nanocrystalline cores for applications in telecom, electrical installation, industry, medical, trains and research projects. Production facilities for cores are located in Slovakia, Malaysia and China. The annual production quantity of amorphous strip is about 2500 metric tons.

## About SEKELS GmbH

SEKELS GmbH develops, produces and trades technical products which are mostly related to magnetism. With a core team of about 20 employees, of which more than half are physicists or engineers, SEKELS presently serves more than 500 customers worldwide.

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As an expert distributor of German VACUUMSCHMELZE GmbH & Co. KG (VAC), SEKELS is offering an in-depth knowledge of the VAC product lines and their applications. Further, Sekels provides technical consultation and the rapid availability of samples and bulk deliveries through comprehensive stock keeping and worldwide logistics.

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SEKELS activities cover development, design and production of customer-specific laminations and core packages, magnetic shielding and shielding systems, inductive components and magnet systems - from prototyping to large bulk consignments. SEKELS is DIN EN ISO 9001:2008 certified and familiar with the relevant norms and standards.

## SEKELS GmbH is represented by MAGPERM LCC in the USA

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