

This method significantly increases the service life of the motor bearings ...

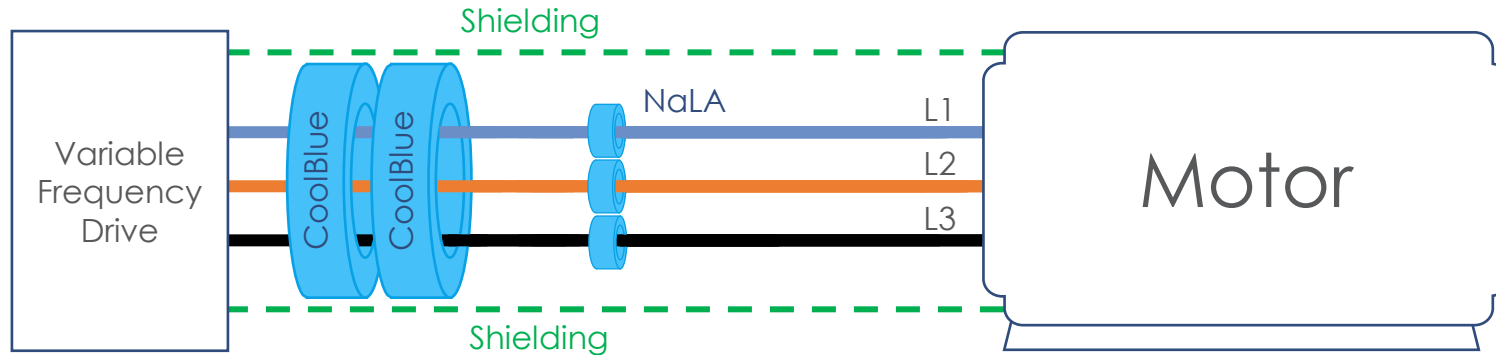
...and thus reduces maintenance costs and standstill periods.

Advanced reduction of noise and bearing currents in motor-inverter systems

Easy to install and to retrofit

Typical applications:  
Pumps, fans, wind turbines, trains, mills

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High frequency common mode currents leading to electrical breakdown in the lubrication of the motor bearings and are causing additional maintenance costs. The Magnetec Nanoperm CoolBlue line made of nanocrystalline material Nanoperm is being used to reduce damaging motor bearing currents in inverter – motor systems. The CoolBlue cores are used for suppressing the common mode EMI noise generated by the frequency converters. In order to achieve an efficient reduction of these destructive effects, CoolBlue cores have to be placed over the connector cables (without N and PE) in the DC-link or at the inverter output. In this configuration, the cores operate as a common-mode choke.

### CoolBlue Selection Guide

Kilowatt	≤ 0,7	≤ 7,5	≤ 30	≤ 75	≤ 315	≤ 1.200	> 1.200
Part No oval	n/a	<a href="#">M-049</a>	<a href="#">M-049</a>	<a href="#">M-283</a>	<a href="#">M-302</a>	<a href="#">M-111</a>	<a href="#">M-248</a>
Part No round	<a href="#">M-923</a>	<a href="#">M-967</a>	<a href="#">M-967</a>	<a href="#">M-113</a>	<a href="#">M-116</a>	<a href="#">M-117</a>	<a href="#">M-205</a>
Isat*/Apk N=1	2	4	4	6	12	16	22
Turns [N]	2	2	1	1	1	1	1
Cable length	50m	2	2	4	4	4	4
up to	100m	4	4	4	4	4	4
	200m	4	4	6	6	6	6
	300m	4	4	6	6	6	6

Only for information, no guaranteed values . For all information no liability assumed. \*Isat: "Quasi Saturation Current" @ B = 1,0 T /  $\mu_{nom}$  / N = 1  
Saturation Current Isat of NANOPERM®: Peak value of the exiting current when the initial inductance level is dropped to 10 per cent, see [www.magnetec.de](http://www.magnetec.de) ; oval: stadium shape

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Types	Nominal dim. [mm] do x di x h	Finished dim [mm] Do <sub>max</sub> xDi <sub>min</sub> xH <sub>max</sub>	AI [uH] @ 10kHz	AI uH] @ 100kHz	Lfe [cm]	Afe [cm <sup>2</sup> ]	Isat* [Apk]
<a href="#">M-923</a>	30 x 20 x 10	32,7 x 17,8 x 12,6	13,6 – 27,2	>6,70	7,8	0,36	2,0
<a href="#">M-967</a>	50 x 40 x 20	53,4 x 36,6 x 23,5	10,4-20,8	>7,30	14,1	0,73	4,5
<a href="#">M-049</a>	50 x 40 x 20	oval:60,7/40,7x42,7/24,8x22,3	12,6 – 28,4	>6,30	14,1	0,8	3,5
<a href="#">M-112</a>	63 x 50 x 30	68 x 43 x 36	23,3 – 46,6	>11,0	17,7	1,44	4,5
<a href="#">M-649</a>	63 x 50 x 30	oval:82,8/45,5x57,5/20,6x33	23,3 – 46,6	>11,0	17,7	1,44	4,5
<a href="#">M-378</a>	75 x 50 x 30	80 x 43 x 36	37,3 – 74,6	>18,5	19,4	2,78	5,0
<a href="#">M-113</a>	80 x 63 x 30	85 x 57 x 35,5	24,1 – 48,2	>12,0	22,4	1,86	6,0
<a href="#">M-283</a>	80 x 63 x 30	oval: 101/62x68/28x37	24,1 – 48,2	>12,0	22,4	1,86	6,0
<a href="#">M-114</a>	100 x 80 x 30	105 x 75 x 35	22,5 – 45,0	>11,2	28,2	2,25	7,5
<a href="#">M-284</a>	100 x 80 x 30	oval: 130/66x94/30x37	22,5 – 45,0	>11,2	28,2	2,25	7,5
<a href="#">M-115</a>	130 x 100 x 30	135 x 94 x 34	24,6 – 52,9	>12,2	35,9	3,33	9,5
<a href="#">M-116</a>	160 x 130 x 30	165 x 123 x 34	20,9 – 45,0	>10,5	45,4	3,24	12
<a href="#">M-302</a>	160 x 130 x 30	oval: 197/111x155/69x36	20,9 – 45,0	>10,5	44,7	3,30	12
<a href="#">M-117</a>	200 x 175 x 30	208 x 166 x 37	12,3 – 24,6	>6,00	58,8	2,74	15,5
<a href="#">M-111</a>	237 x 201 x 30	oval: 305/147x249/95x37	14,5 – 29,9	>7,20	69,6	3,94	18,5
<a href="#">M-205</a>	300 x 254 x 30	304 x 246 x 36	15,8 – 31,5	7,20	87,1	5,20	23
<a href="#">M-248</a>	300 x 254 x 30	oval: 392/160x326/94x37	15,8 – 31,5	>7,90	87,1	5,20	23
<a href="#">M-503**</a>	500 x 450 x 30	513 x 437 x 37	8,0 – 20,0		149,1	5,60	40