ECLIPSE MAGNETICS

Sintered Neodymium Iron Boron (NdFeB) Magnets

Contents

Sintered NdFeB magnets

Characteristic magnetic properties at room temperature (20°C)

Grade	Remanence BR mT		Normal coercivity Hcb kA/m		Intrinsic coercivity Hcj kA/m	Mass energy product BH(max) kJ/m3		Max. operating temp.
	min	typ	min	typ	min	min	typ	
N35	1170	1220	870	920	955	263	279	80
N38	1220	1260	870	920	955	279	303	80
N40	1260	1300	870	920	955	303	318	80
N42	1300	1330	870	920	955	318	334	80
N45	1330	1370	900	930	955	334	358	80
N48	1370	1410	900	930	955	358	382	80
N50	1410	1440	830	850	875	382	398	70
N52	1440	1470	830	850	875	398	414	70
N33M	1140	1170	830	880	1114	239	263	100
N35M	1170	1220	870	920	1114	263	279	100
N38M	1220	1260	900	950	1114	279	303	100
N40M	1260	1300	930	980	1114	303	318	100
N42M	1300	1330	950	1000	1114	318	334	100
N45M	1330	1370	980	1030	1114	334	358	100
N48M	1370	1410	1010	1060	1114	358	382	90
N50M	1410	1440	1030	1080	1114	382	398	90
N30H	1080	1140	810	860	1353	223	239	120
N33H	1140	1170	830	880	1353	239	263	120
N35H	1170	1220	870	920	1353	263	279	120
N38H	1220	1260	900	950	1353	279	303	120
N40H	1260	1300	930	980	1353	303	318	120
N42H	1300	1330	950	1000	1353	318	334	120
N44H	1330	1360	970	1020	1353	334	350	120
N46H	1360	1380	980	1040	1353	350	366	120
N48H	1380	1410	1010	1060	1353	366	382	120
N30SH	1080	1140	810	860	1592	223	239	150
N33SH	1140	1170	830	880	1592	239	263	150
N35SH	1170	1220	870	920	1592	263	279	150
N38SH	1220	1260	900	950	1592	279	303	150
N40SH	1260	1300	930	980	1592	303	318	150
N42SH	1300	1330	950	1000	1592	318	334	150
N44SH	1330	1360	970	1020	1592	334	350	150
N46SH	1360	1380	980	1040	1592	350	366	150
N28UH	1040	1080	770	810	1989	199	223	180
N30UH	1080	1140	810	860	1989	223	239	180
N33UH	1140	1170	830	880	1989	239	263	180
N35UH	1170	1220	870	920	1989	263	279	180
N38UH	1220	1260	900	950	1989	279	303	180
N40UH	1260	1300	930	980	1989	303	318	180
N28EH	1040	1080	770	810	2387	199	223	200
N30EH	1080	1140	810	860	2387	223	239	200
N33EH	1140	1170	830	880	2387	239	263	200
N35EH	1170	1220	870	920	2387	263	279	200
N38EH	1220	1260	900	950	2387	279	303	200
N25AH	970	1020	730	770	2787	180	200	220
iHc at 150°C, min. 1200KA/m								
iHc at 180°C, min. 900KA/m								
N28AH	1040	1080	770	810	2787	203	218	220
iHc at 150°C, min. 1200KA/m								
iHc at 180°C, min. 900KA/m								
N30AH	1080	1140	810	860	2787	220	250	220
iHc at 150°C, min. 1200KA/m								
iHc at 180°C, min. 900KA/m								
N25BH	950	1000	710	750	3000	170	190	230
iHc at 150°C, min. 1300KA/m								
iHc at 180°C, min. 950KA/m								

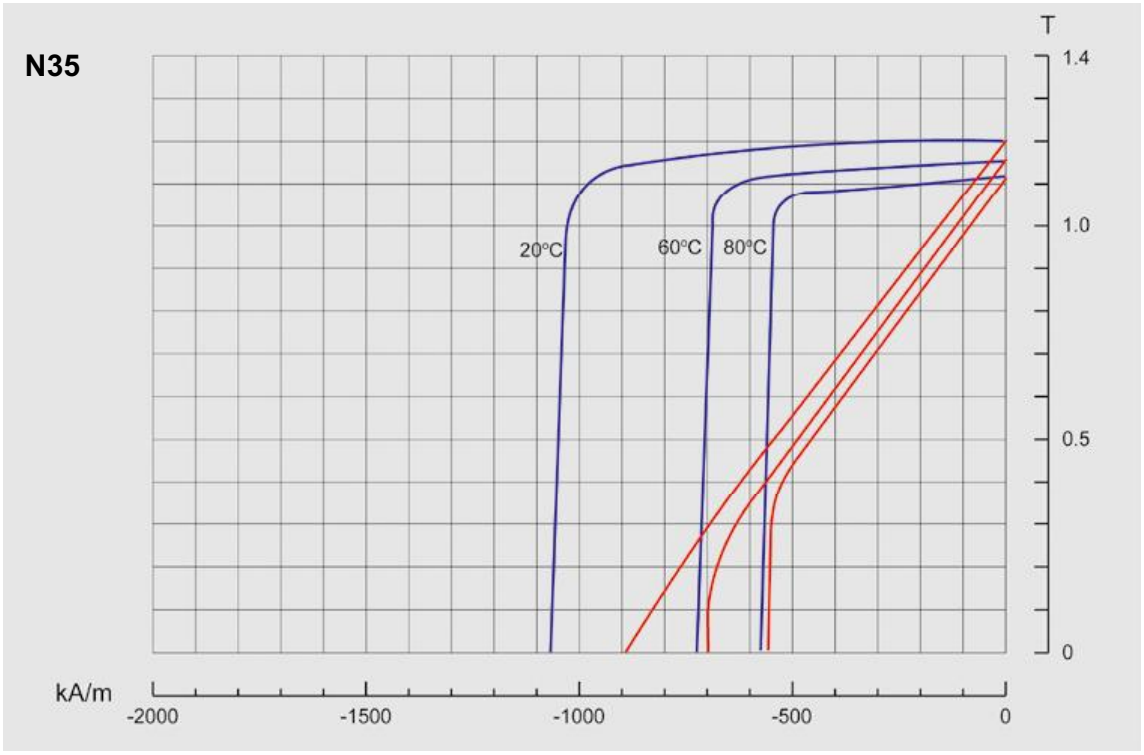
Remarks on facing table

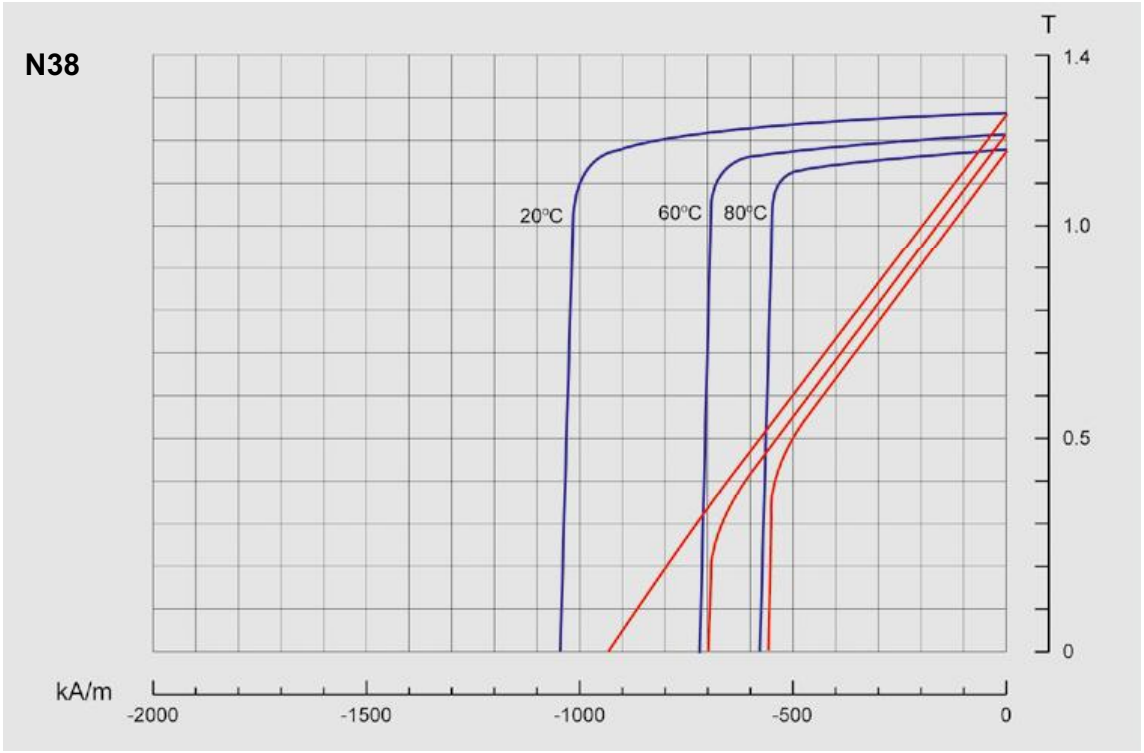
1. The max working temperature is only for reference, it is dependent on the circuit in which the magnet is operating.
2. Customers are advised to consult us on any application involving temperatures near to 150°C.
3. When L/D = 0.7, the magnet can be operated at maximum working temperature before irreversable losses occur.

Physical properties at room temperature (20°C)

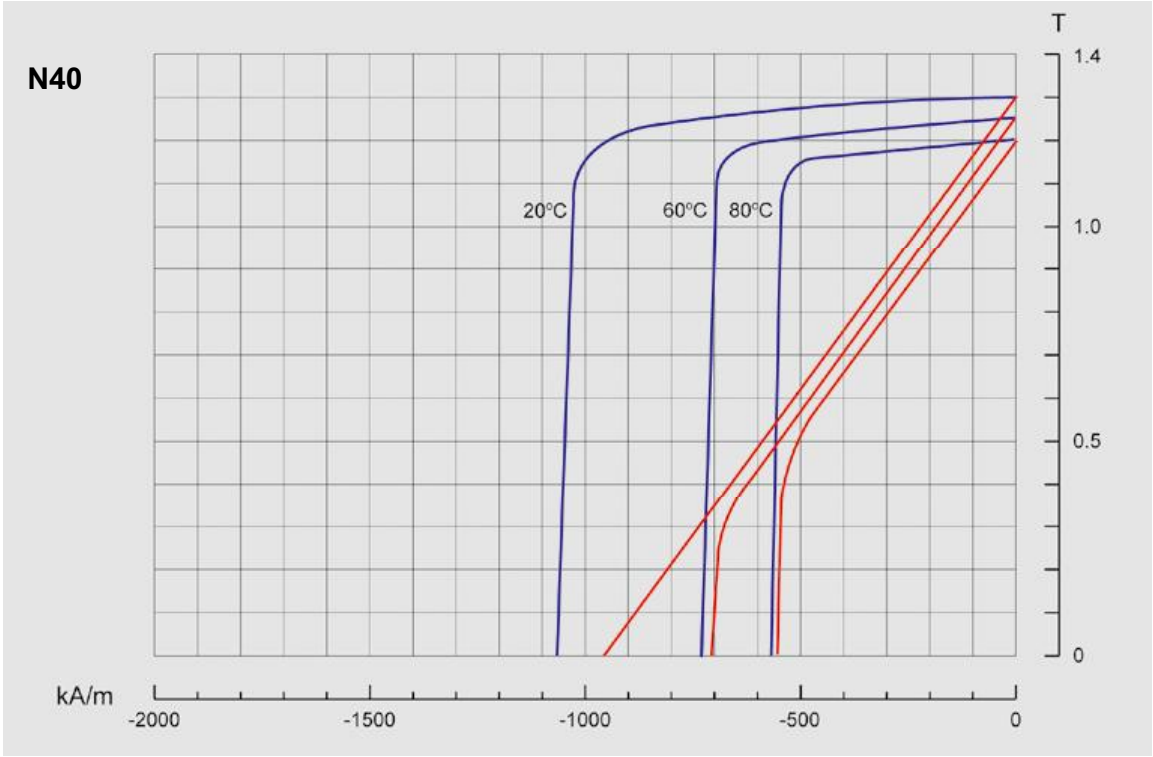
Temp. Coeff. Of Br	–0.11%/°C
Density	7.5/cm^3
Vickers Hardness	600Hv
Tensile Strength	8.0kg/mm^2
Specific Heat	0.12 kcal/(kg,°C)
Young's Modulus	1.6 × 10^{11}N/m^2
Poisson's Ratio	0.24
Curie Temperature	310–340°C
Temp. Coeff of iHc	–0.60%/°C
Electrical Resistivity	144 μΩ.cm
Flexural Strength	25kg/mm
Coeff. Of Thermal Expansion	4×10^{-6}/°C
Thermal Conductivity	7.7 kcal/(m.h. °C)
Rigidity	0.64N/m^2
Compressibility	9.8 × $10^{-12}$$m^2$/N

Demagnetisation curves

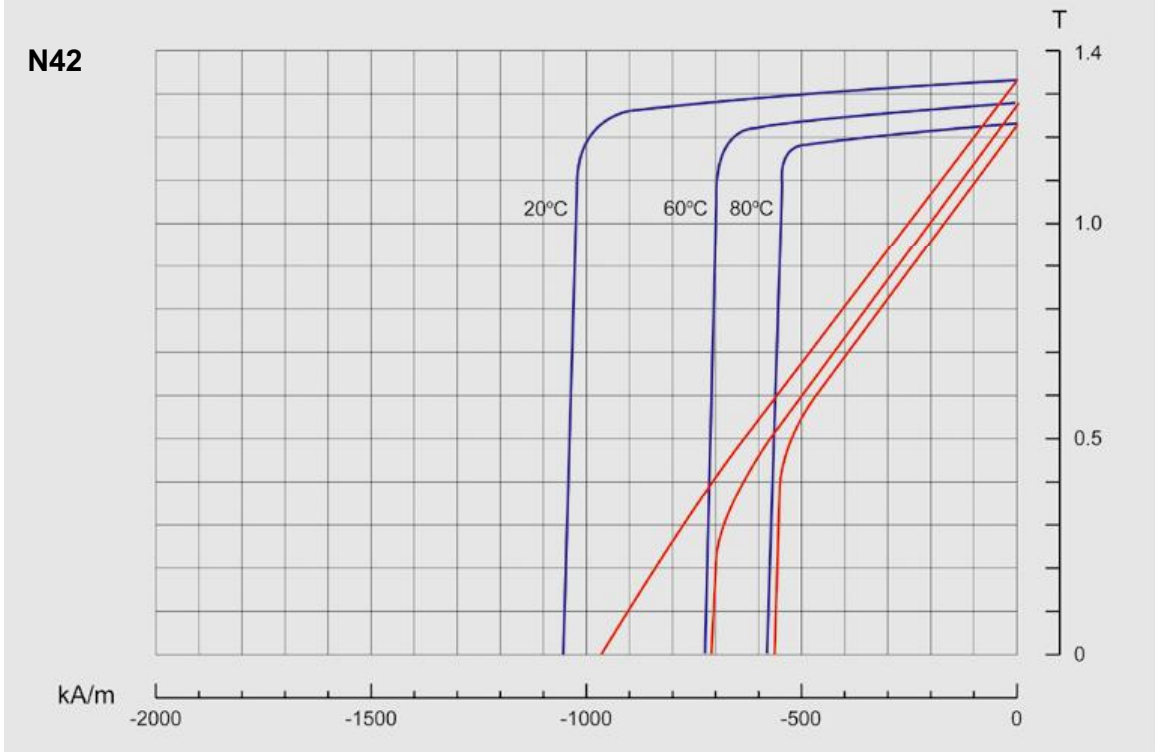




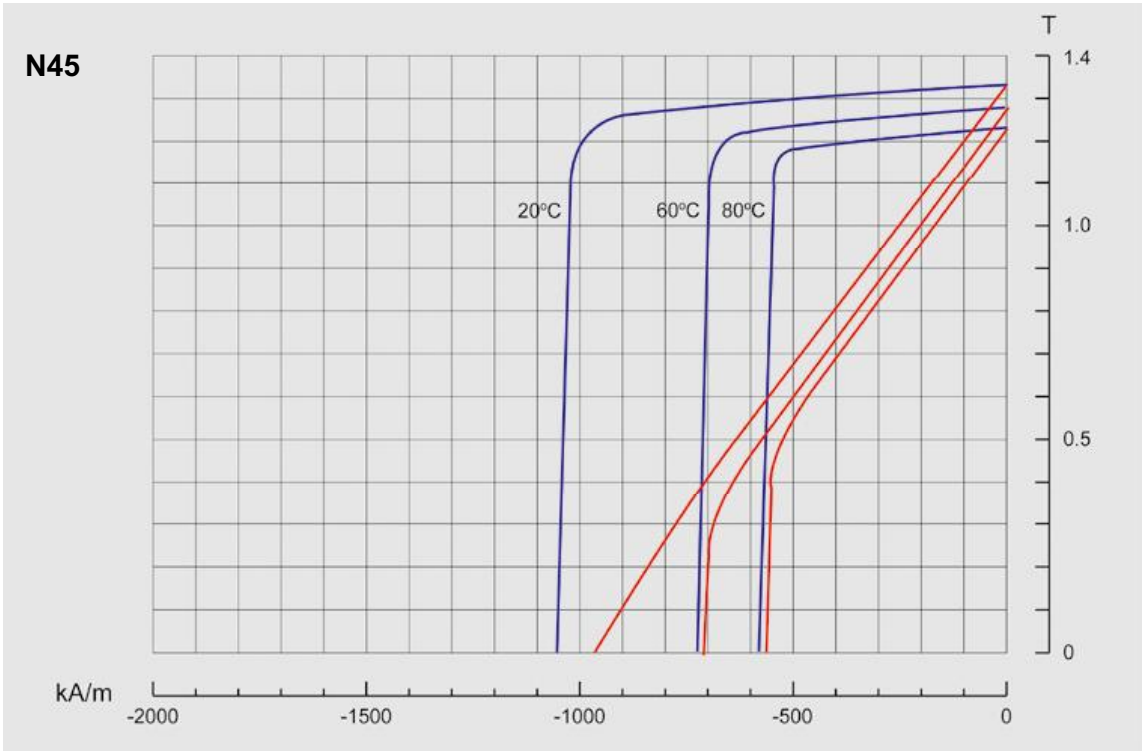
N40

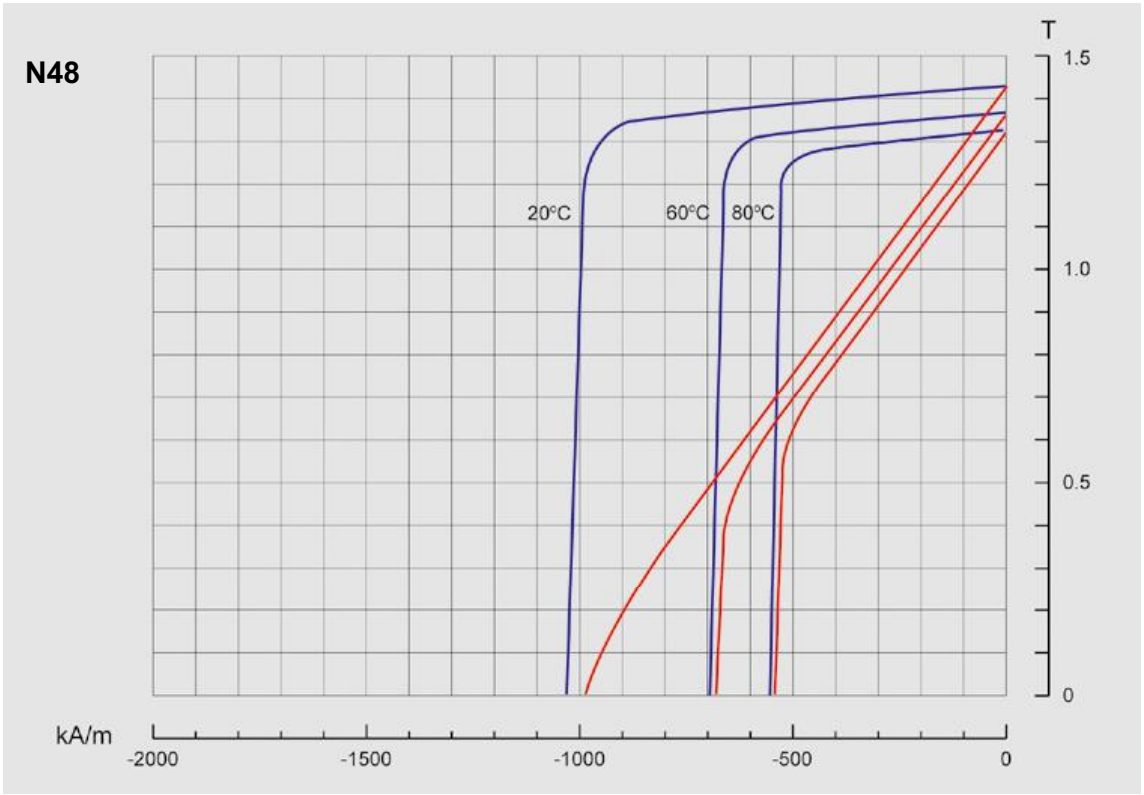

T
1.4
1.0
0.5
0
20°C
60°C
80°C
kA/m
-2000
-1500
-1000
-500
0

N42


T
1.4
1.0
0.5
0
20°C
60°C
80°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves





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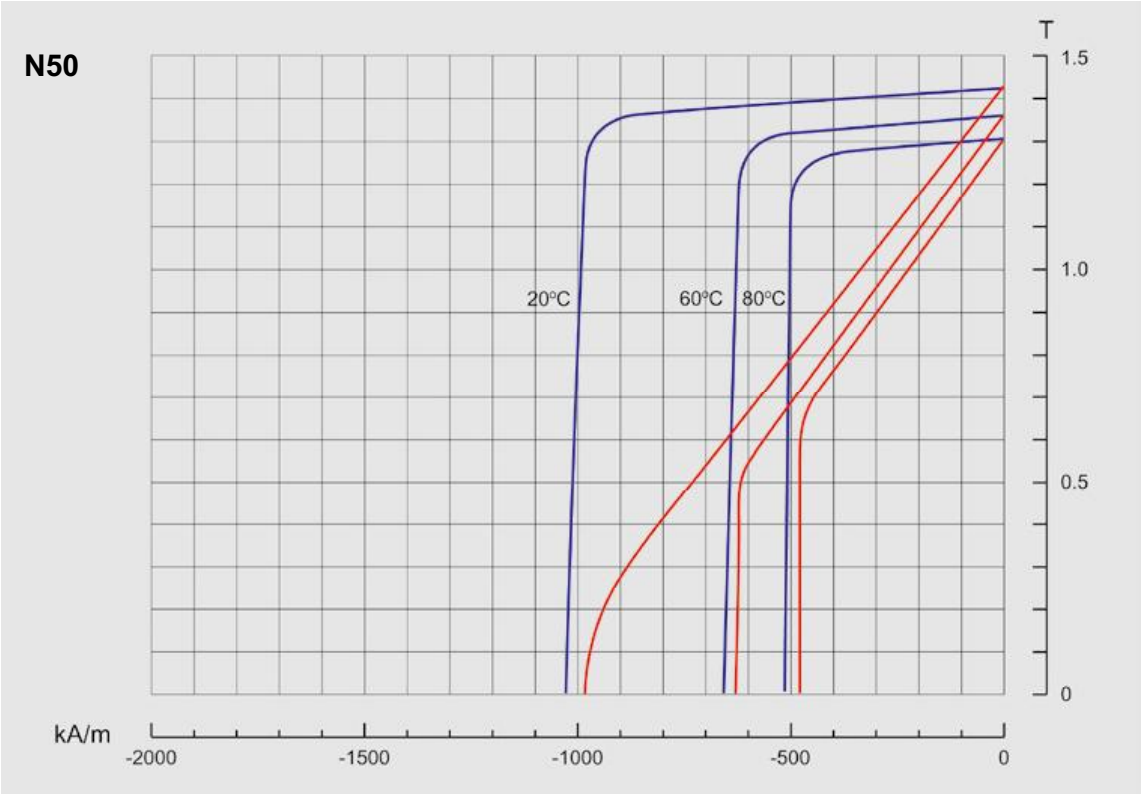
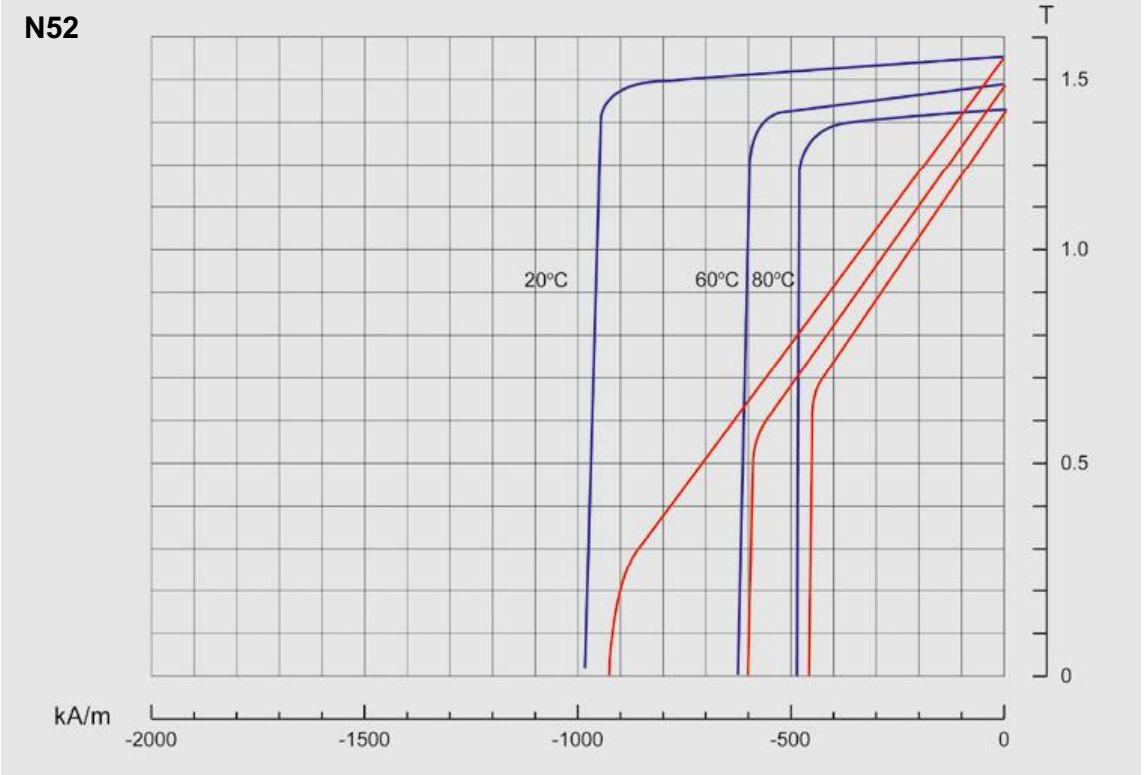
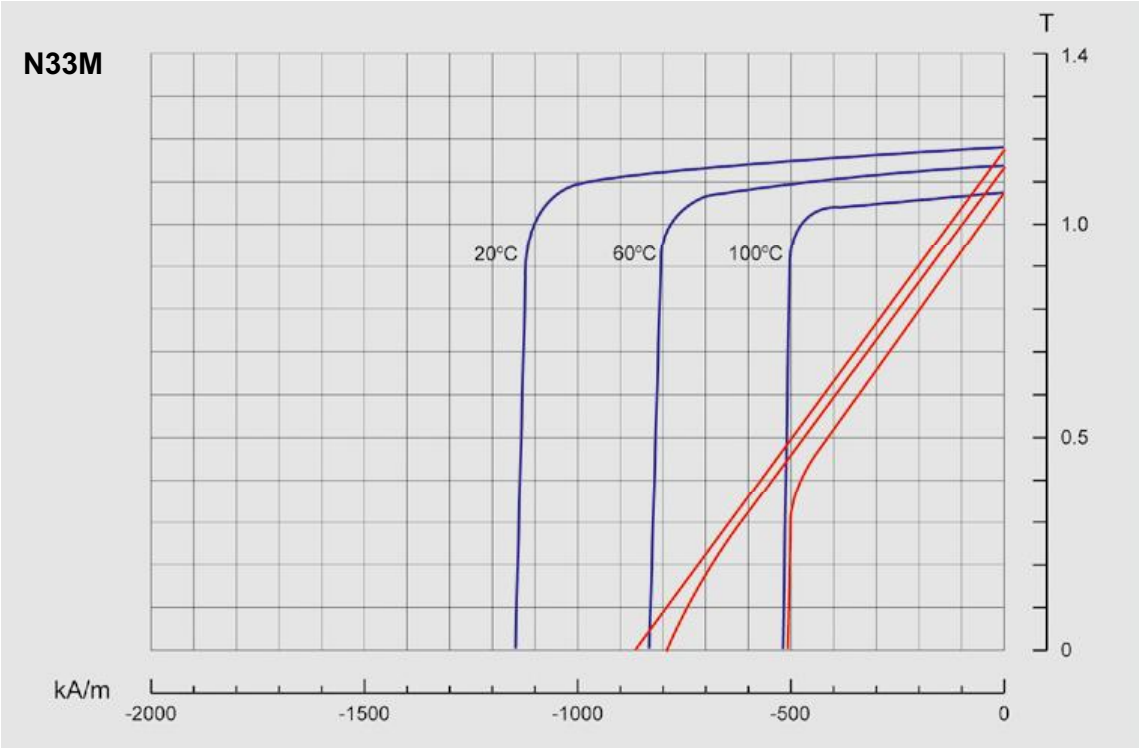
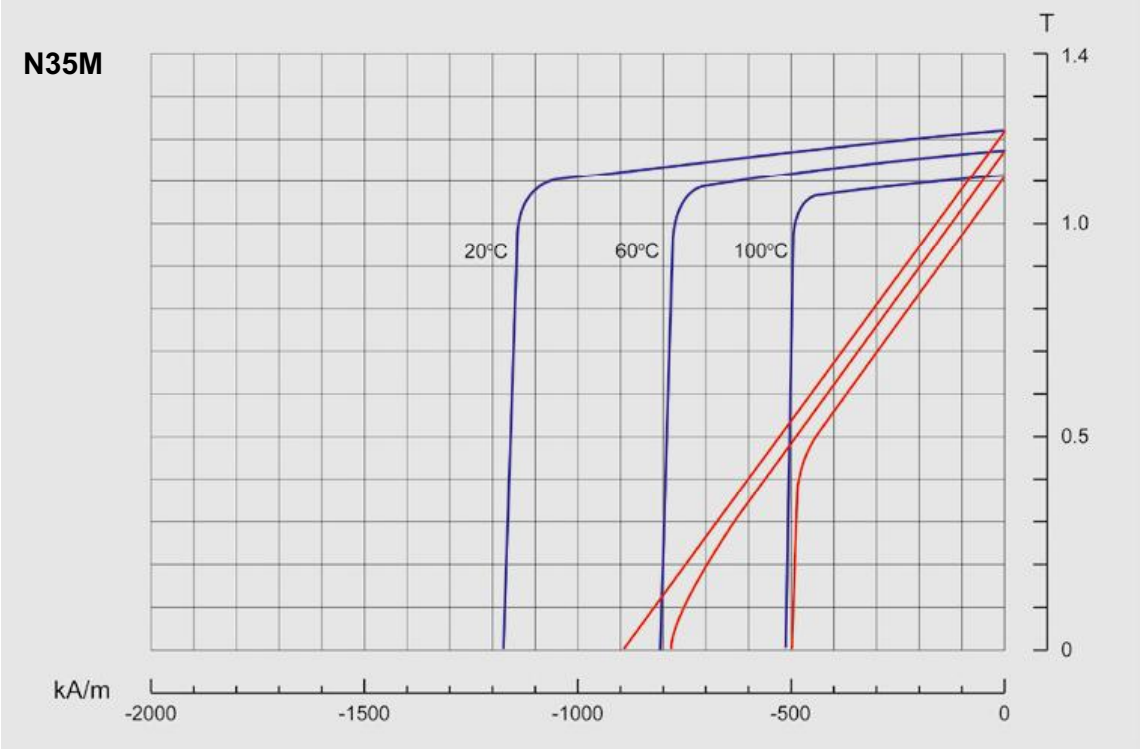

T
1.5
1.0
0.5
0
20°C
60°C
80°C
kA/m
-2000
-1500
-1000
-500
0

N52

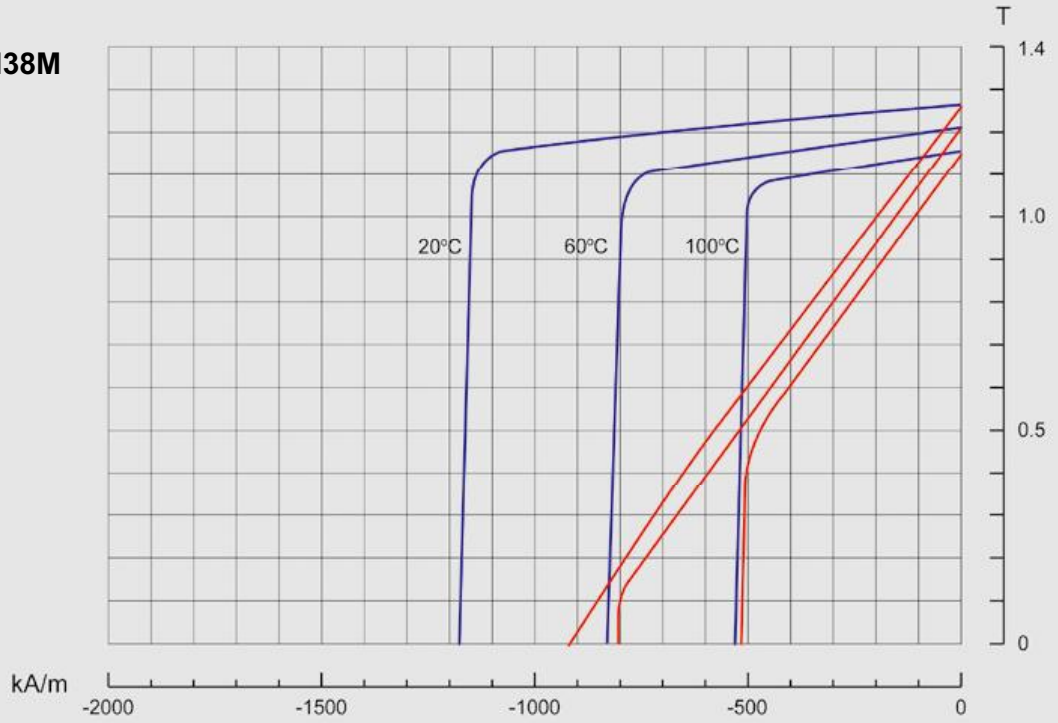

T
1.5
1.0
0.5
0
20°C
60°C
80°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

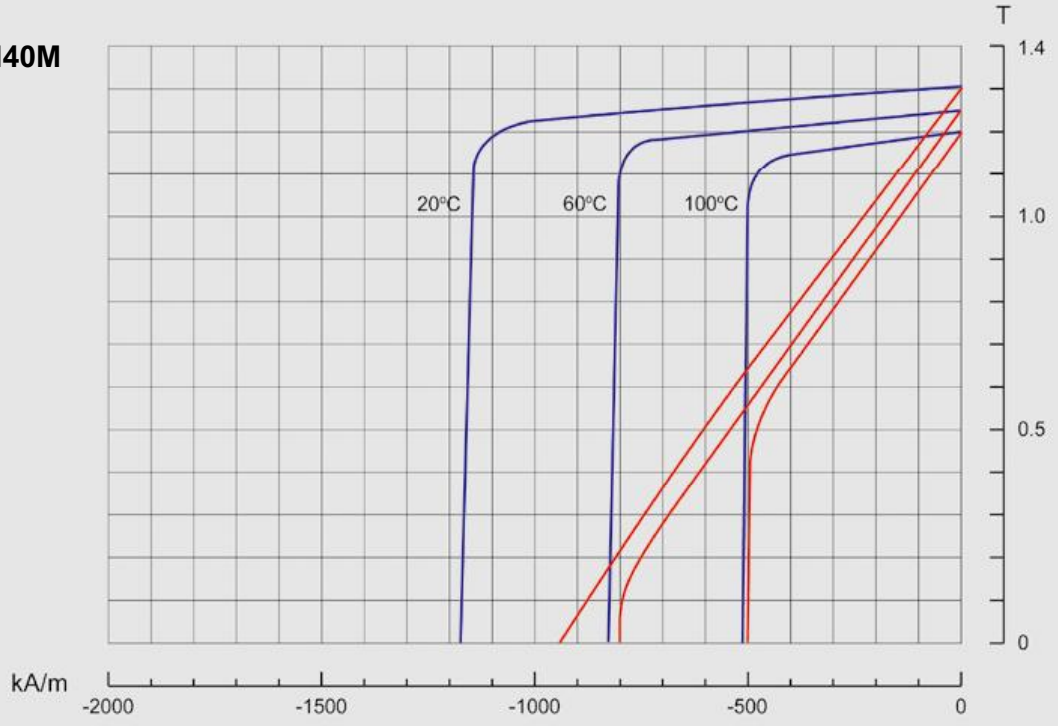




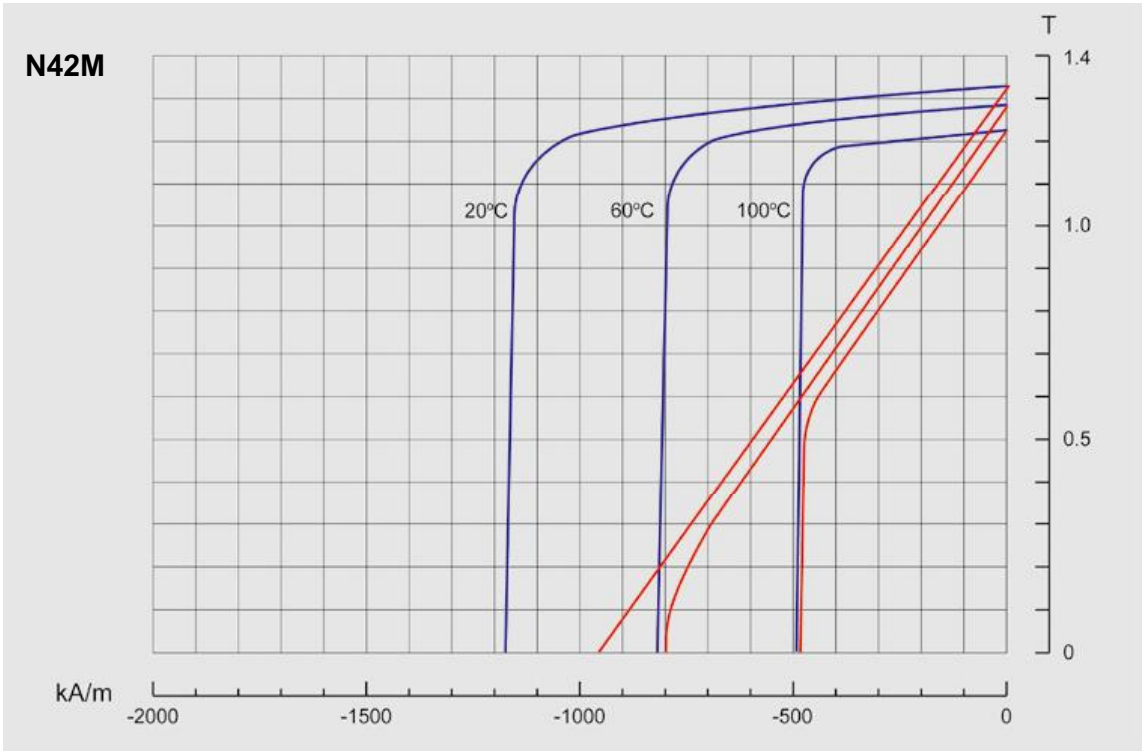
N38M

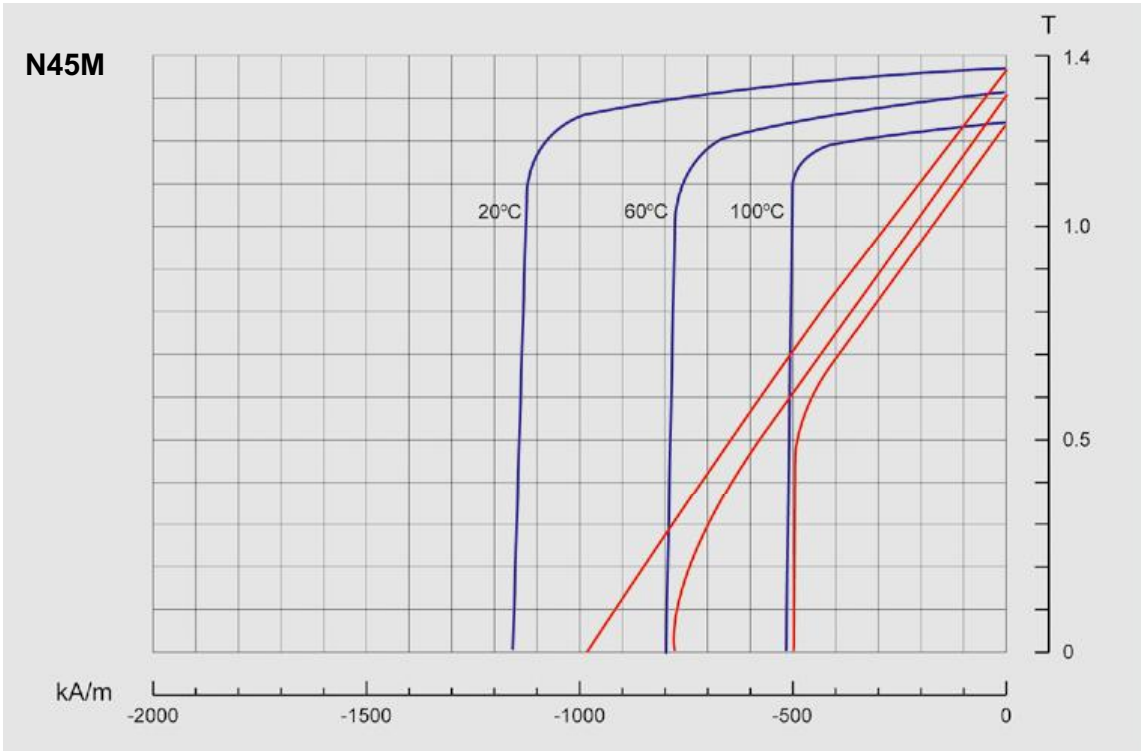

T
1.4
1.0
0.5
0
20°C
60°C
100°C
kA/m
-2000
-1500
-1000
-500
0

N40M

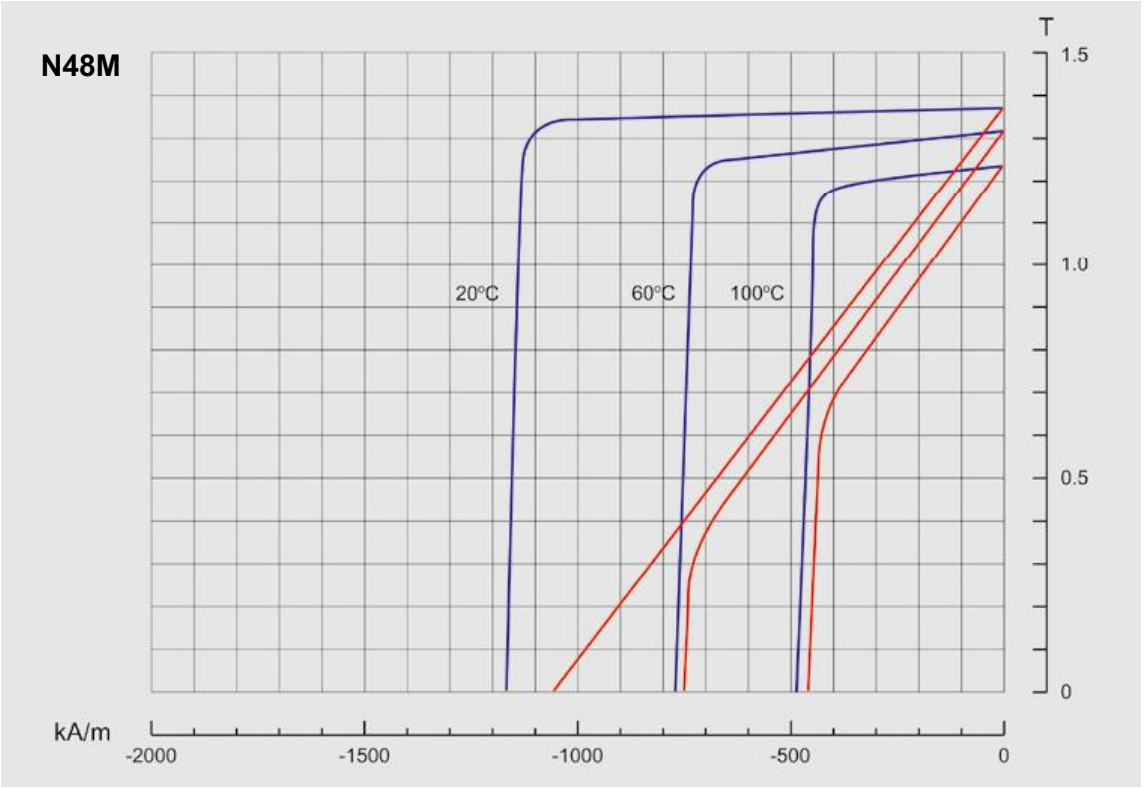

T
1.4
1.0
0.5
0
20°C
60°C
100°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

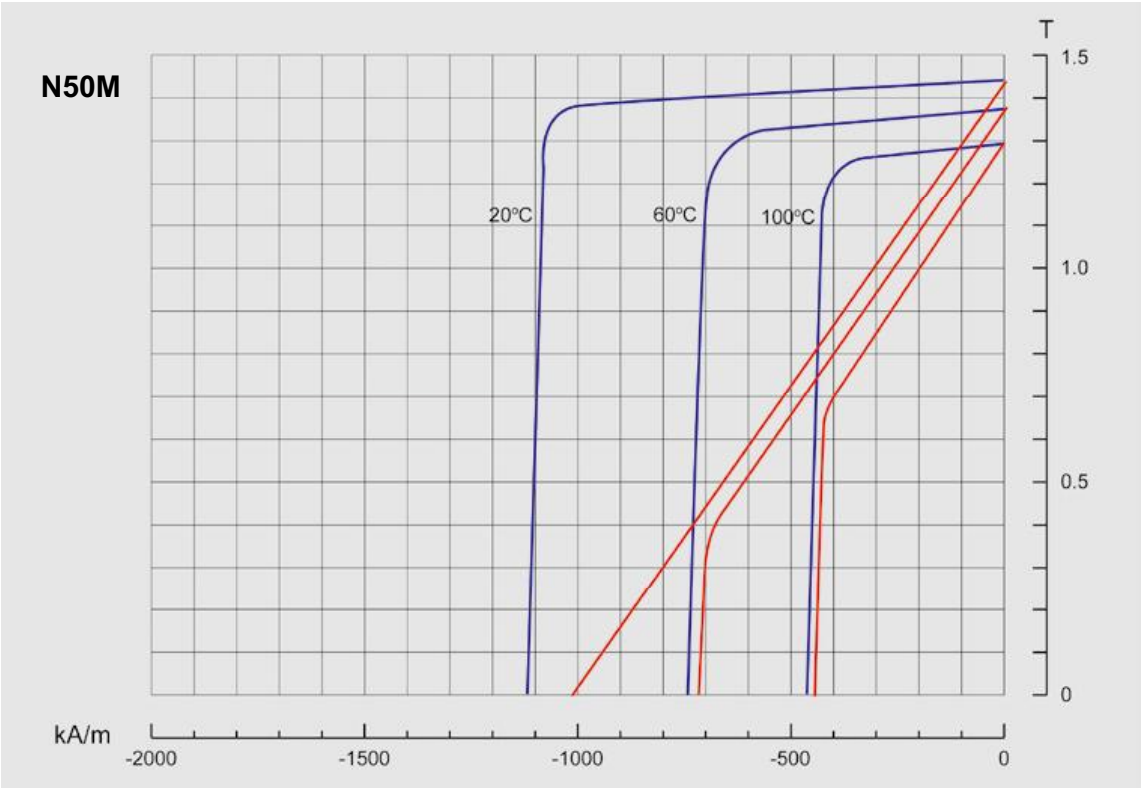




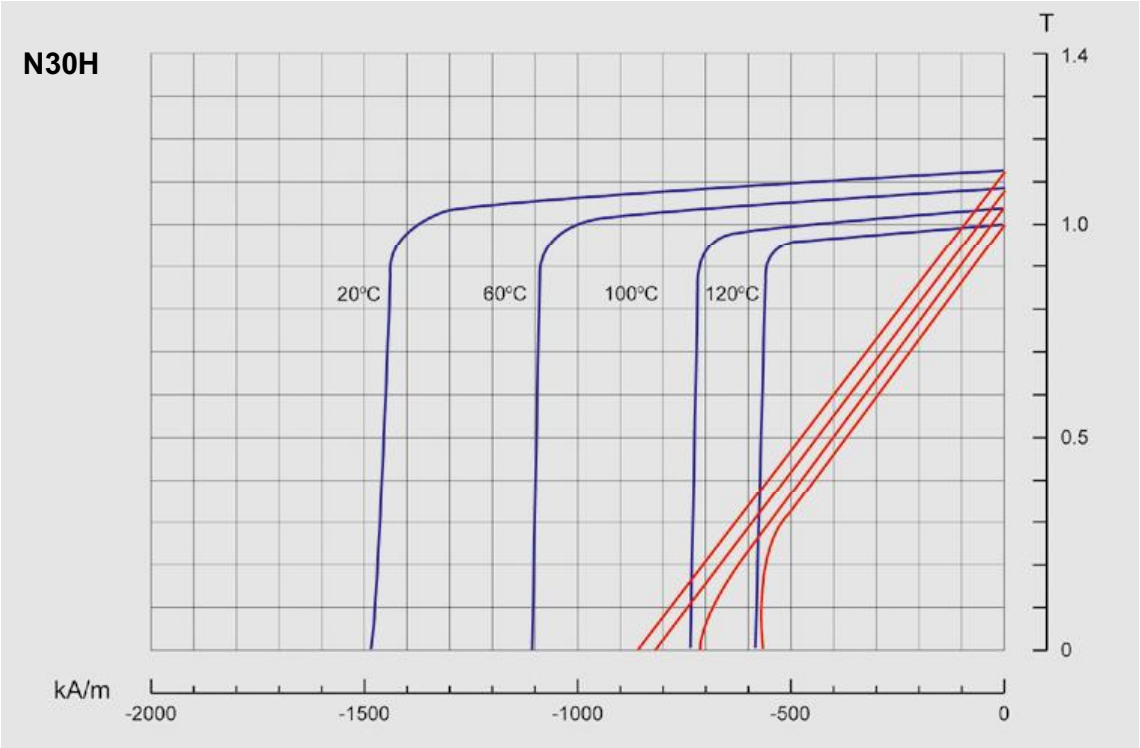
N48M

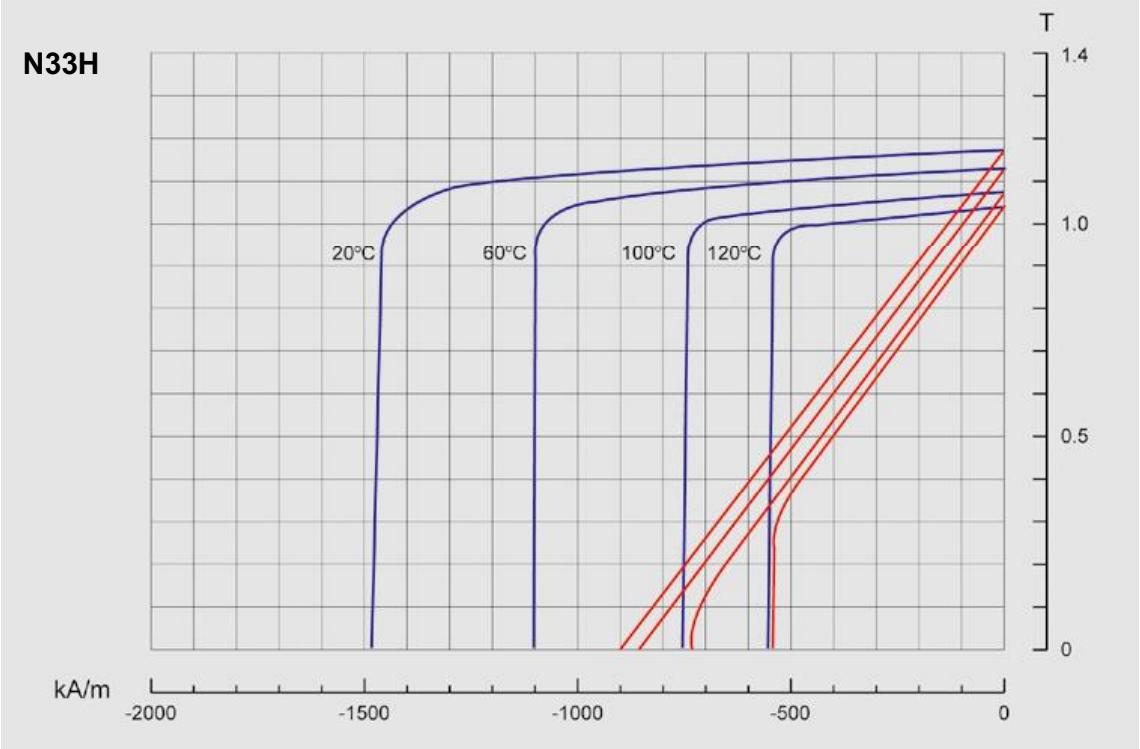

T
1.5
1.0
0.5
0
20°C
60°C
100°C
kA/m
-2000
-1500
-1000
-500
0

N50M

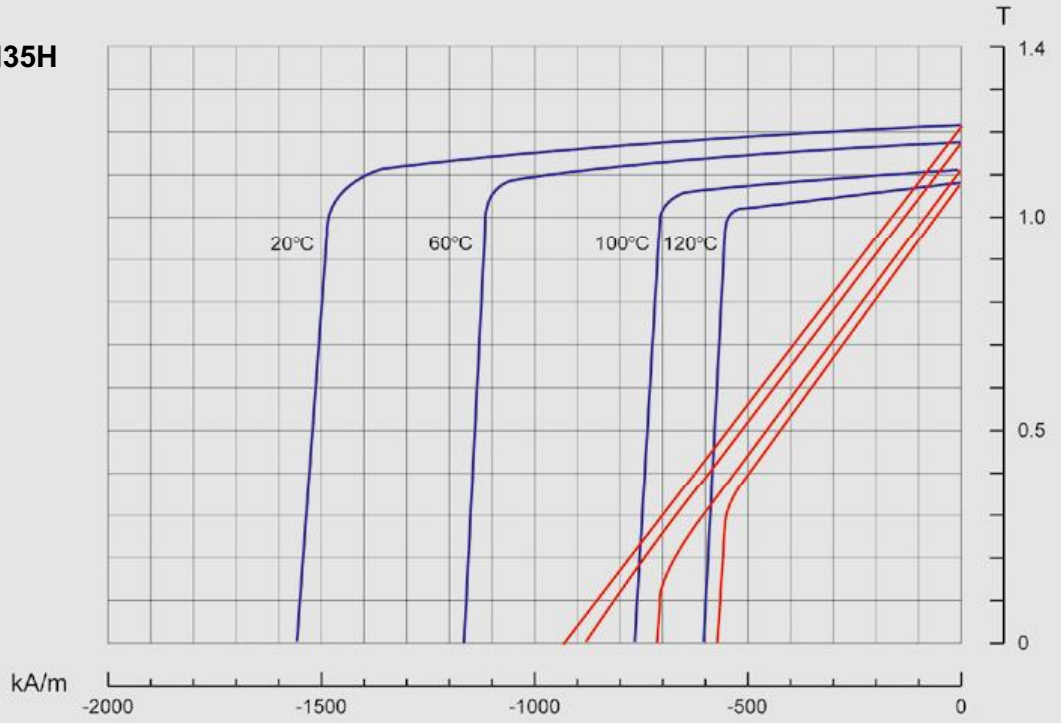

T
1.5
1.0
0.5
0
20°C
60°C
100°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

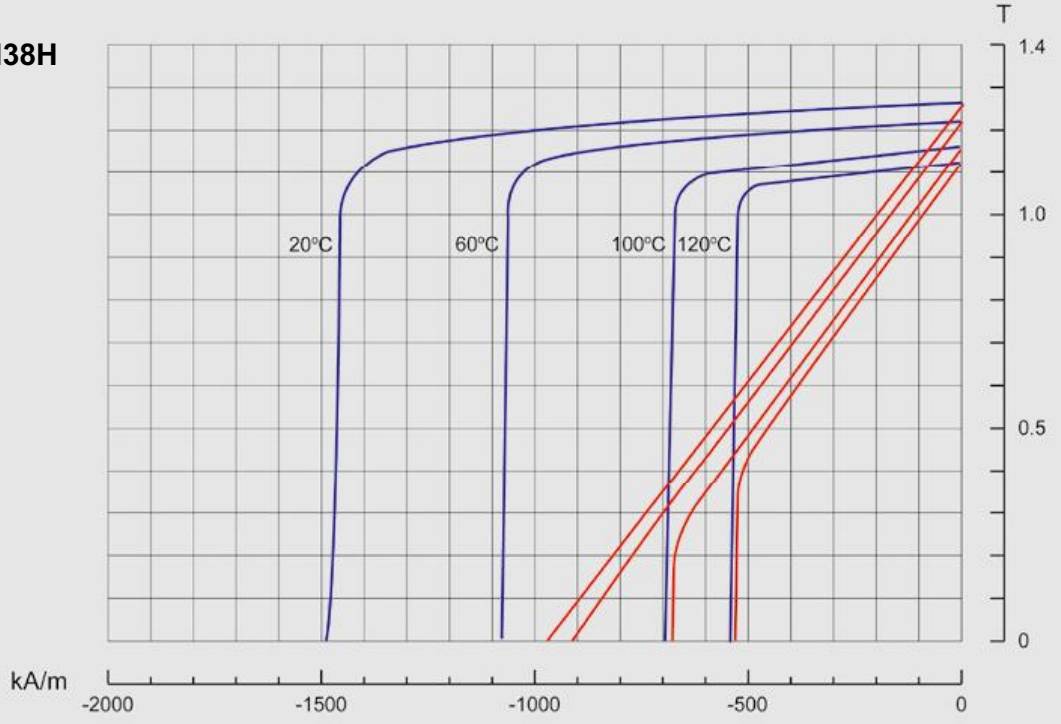




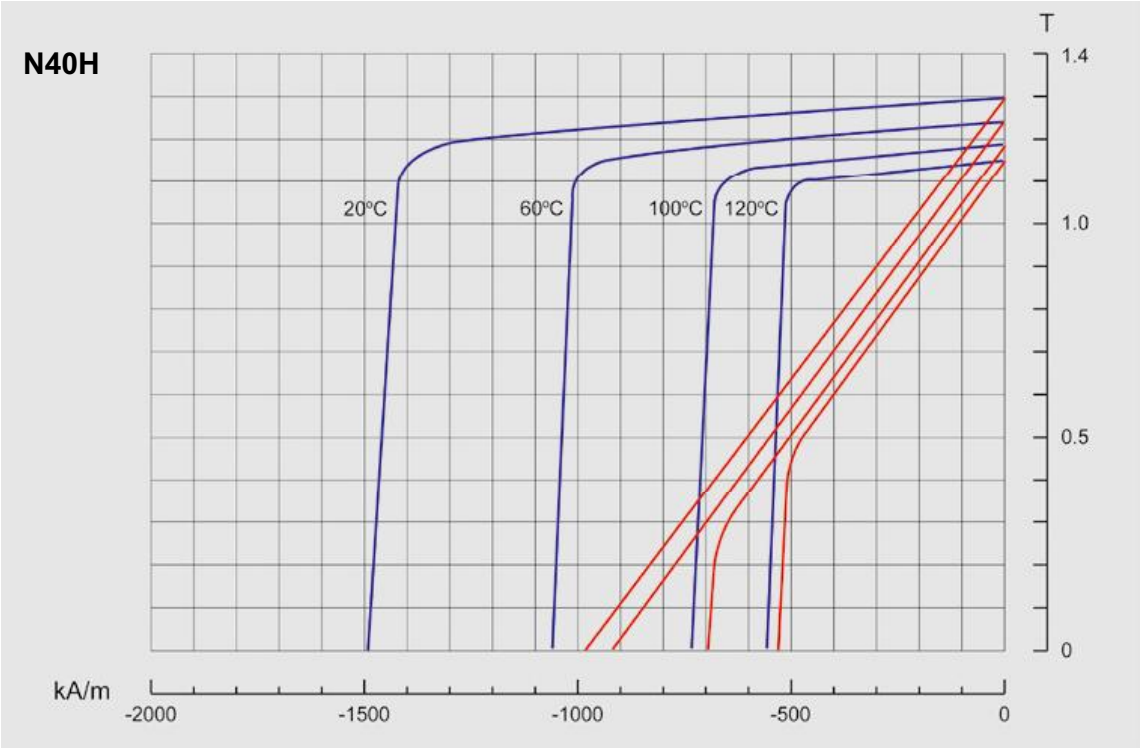
N35H

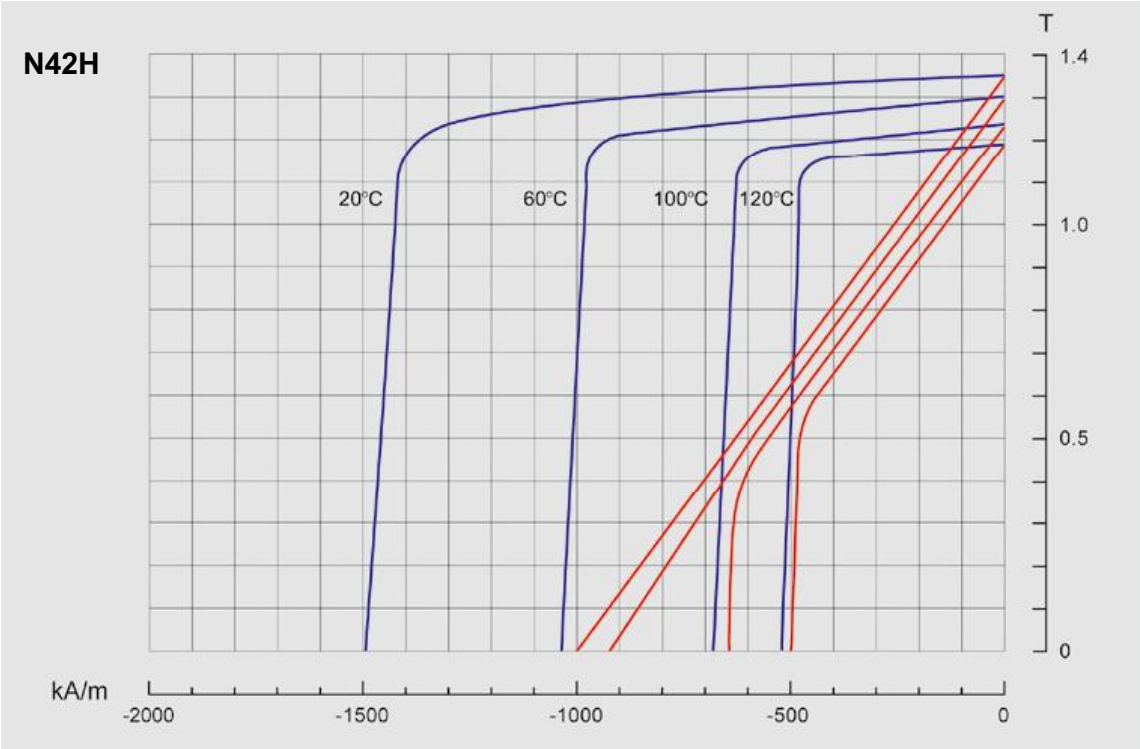

T
1.4
1.0
0.5
0
20°C
60°C
100°C
120°C
kA/m
-2000
-1500
-1000
-500
0

N38H

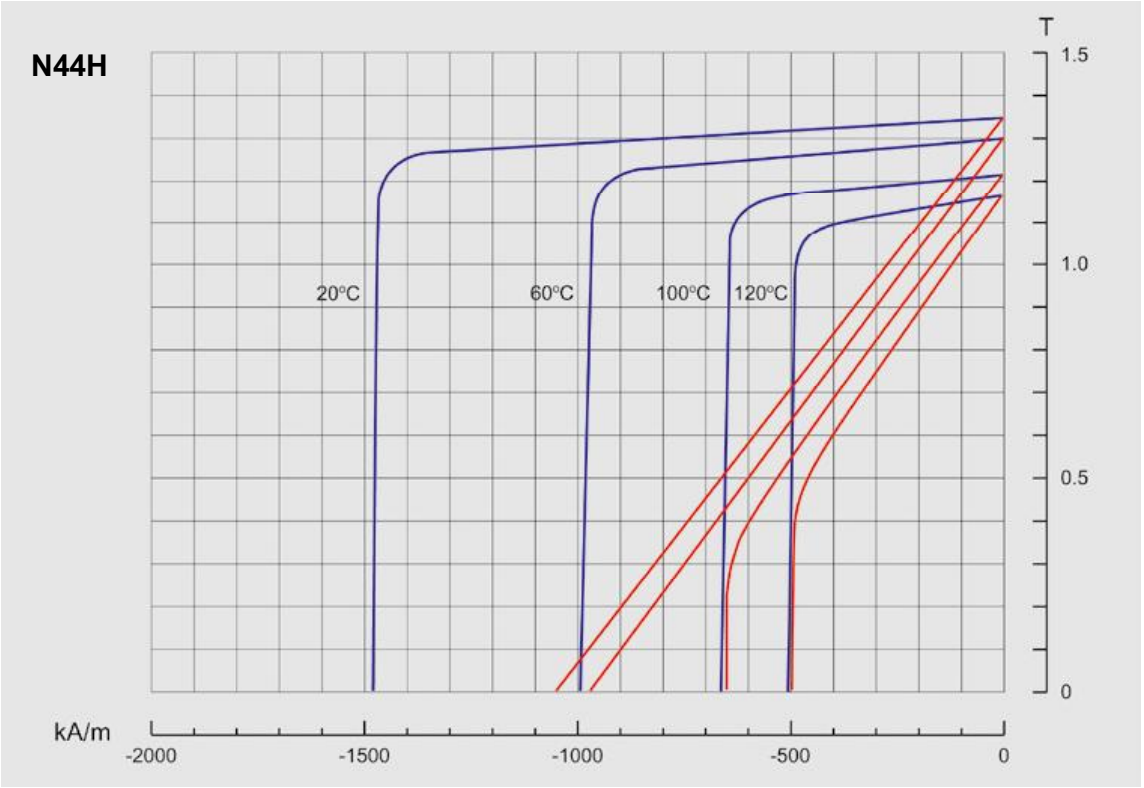

T
1.4
1.0
0.5
0
20°C
60°C
100°C
120°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

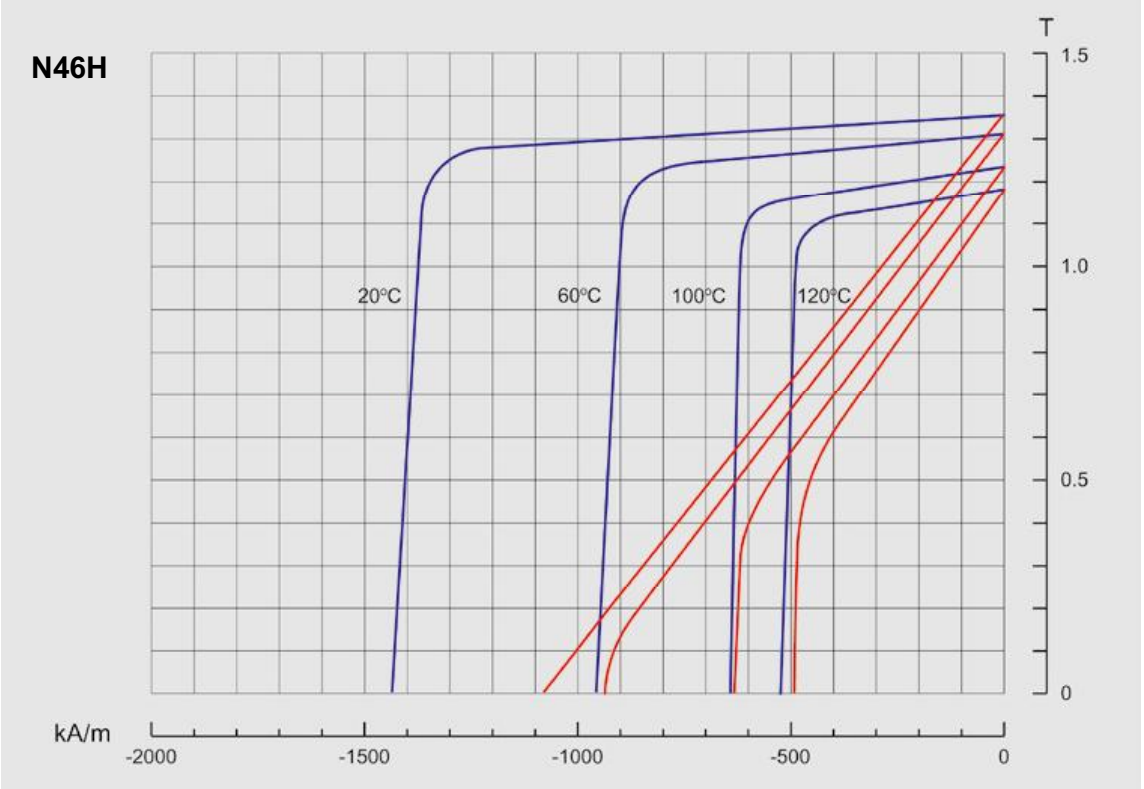




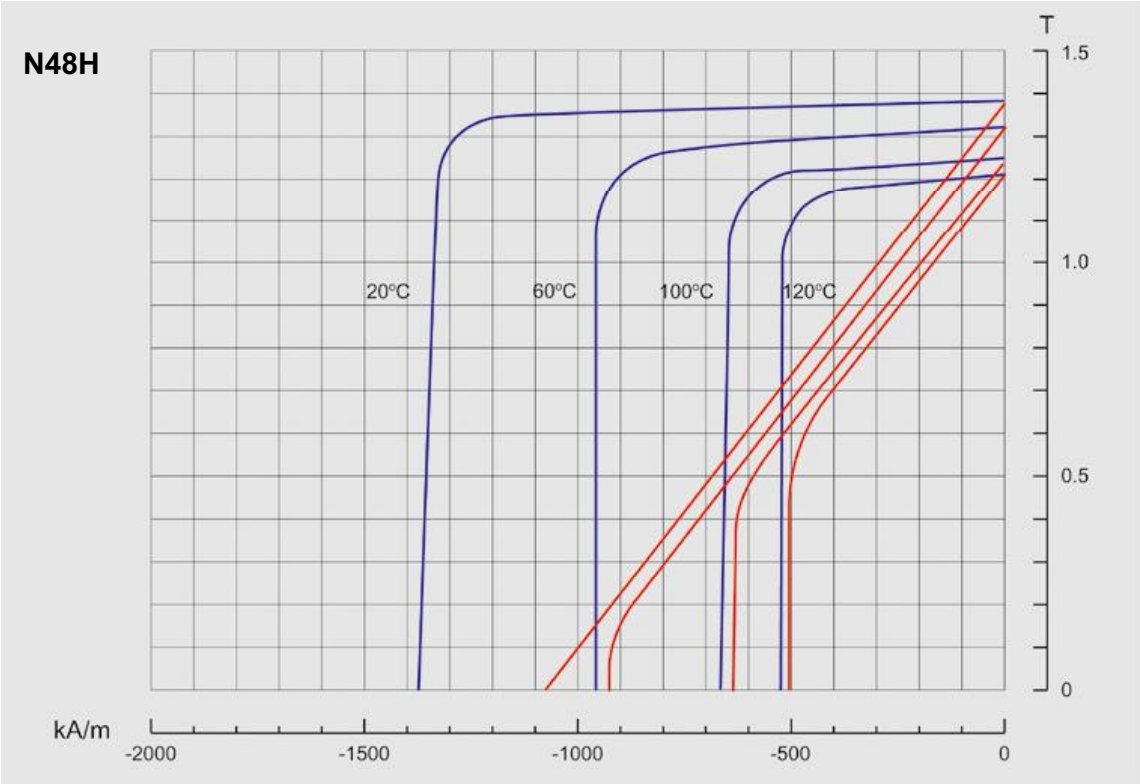
N44H

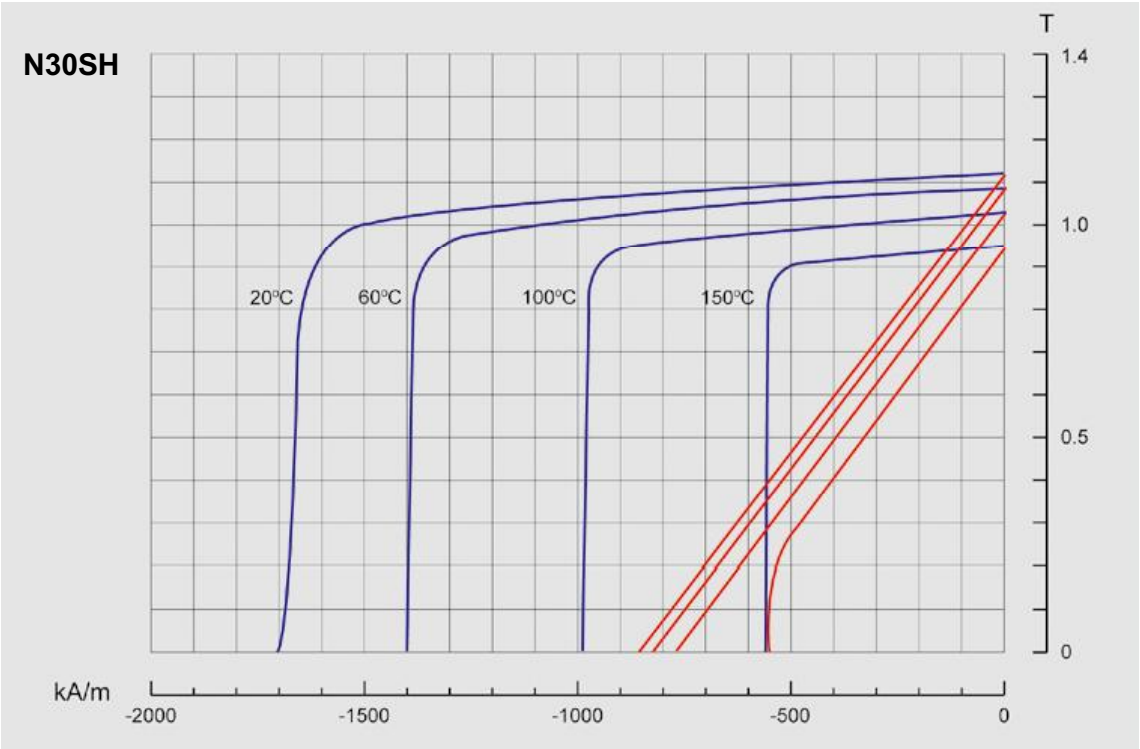

T
1.5
1.0
0.5
0
20°C
60°C
100°C
120°C
kA/m
-2000
-1500
-1000
-500
0

N46H

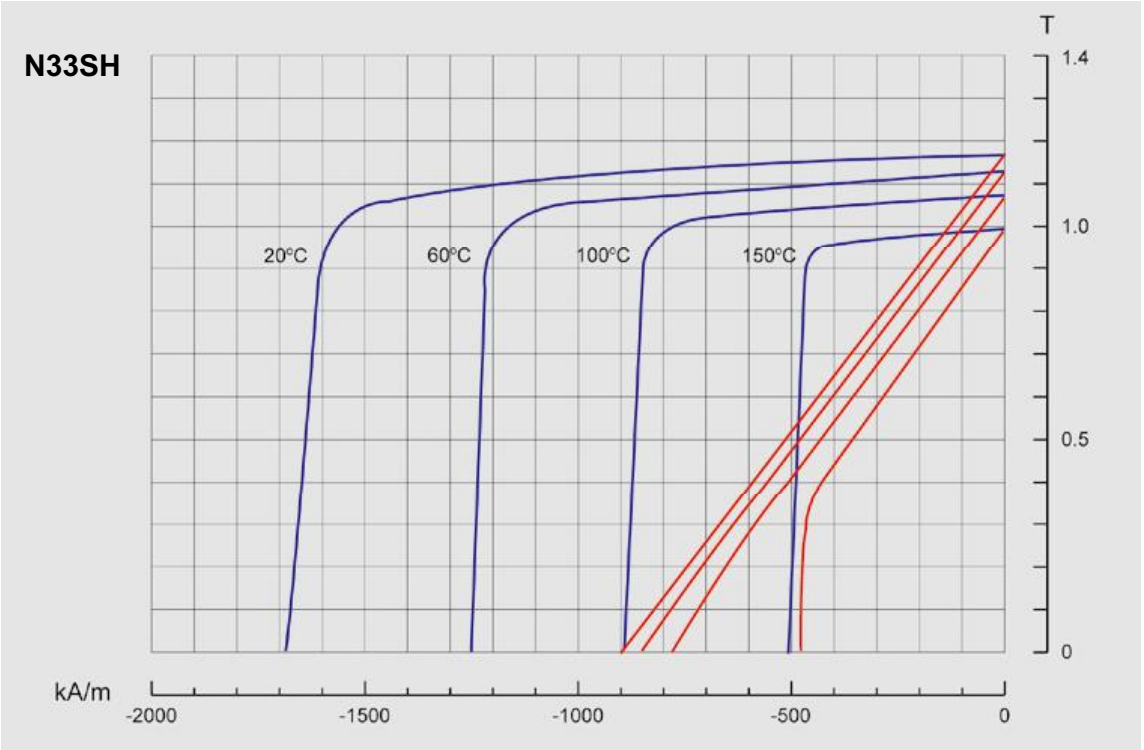

T
1.5
1.0
0.5
0
20°C
60°C
100°C
120°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

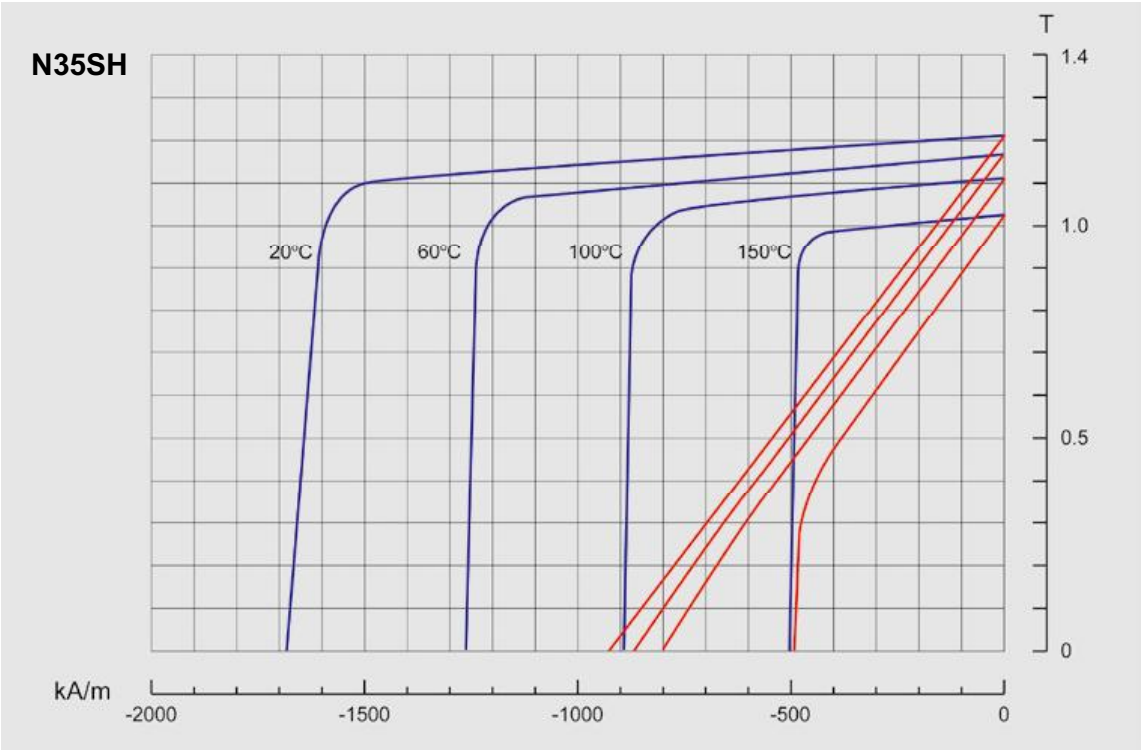




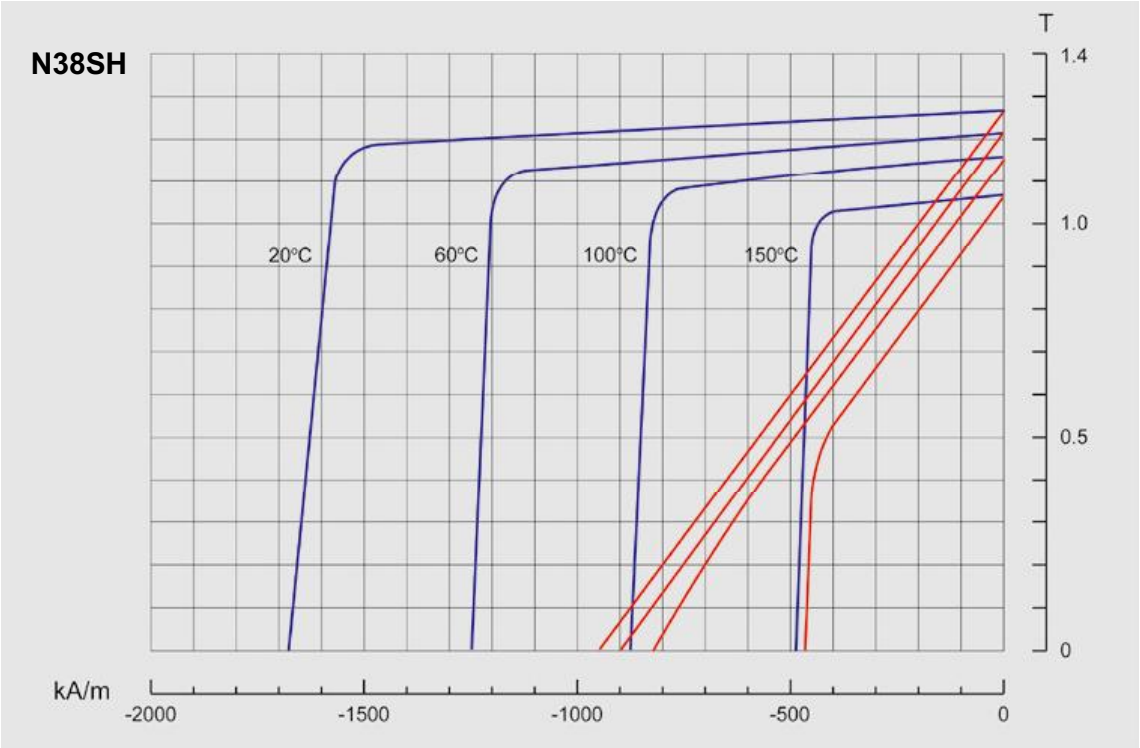
N33SH

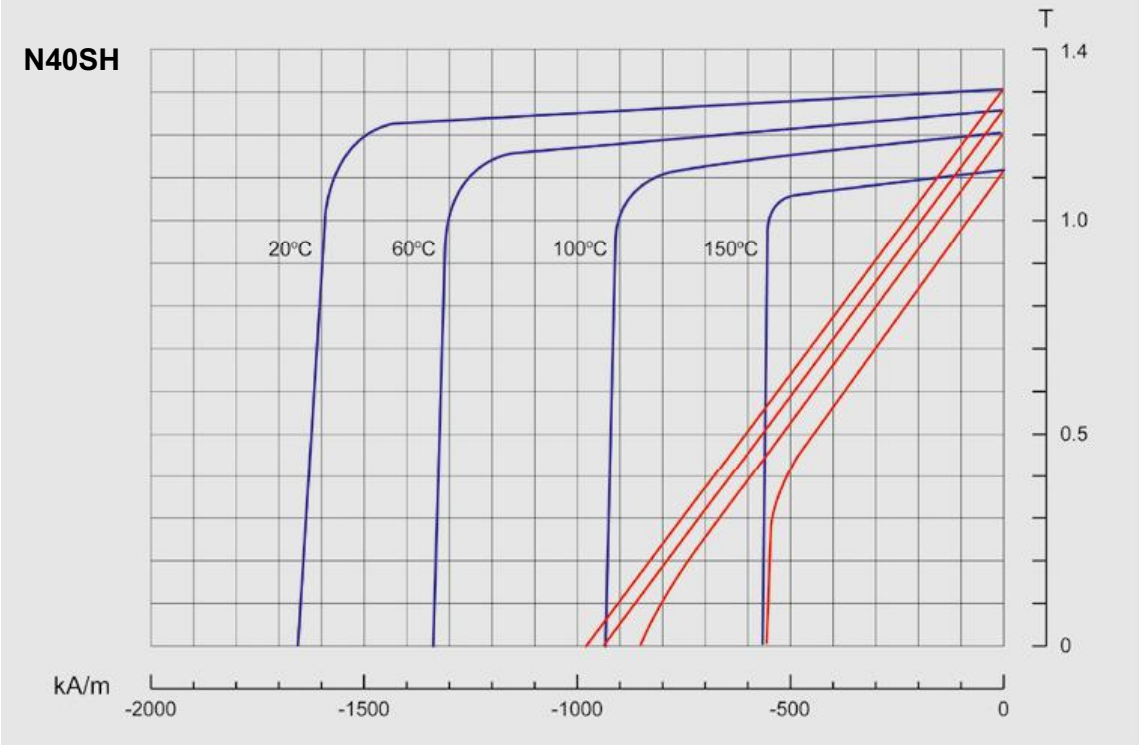

T
1.4
1.0
0.5
0
20°C
60°C
100°C
150°C
kA/m
-2000
-1500
-1000
-500
0

N35SH

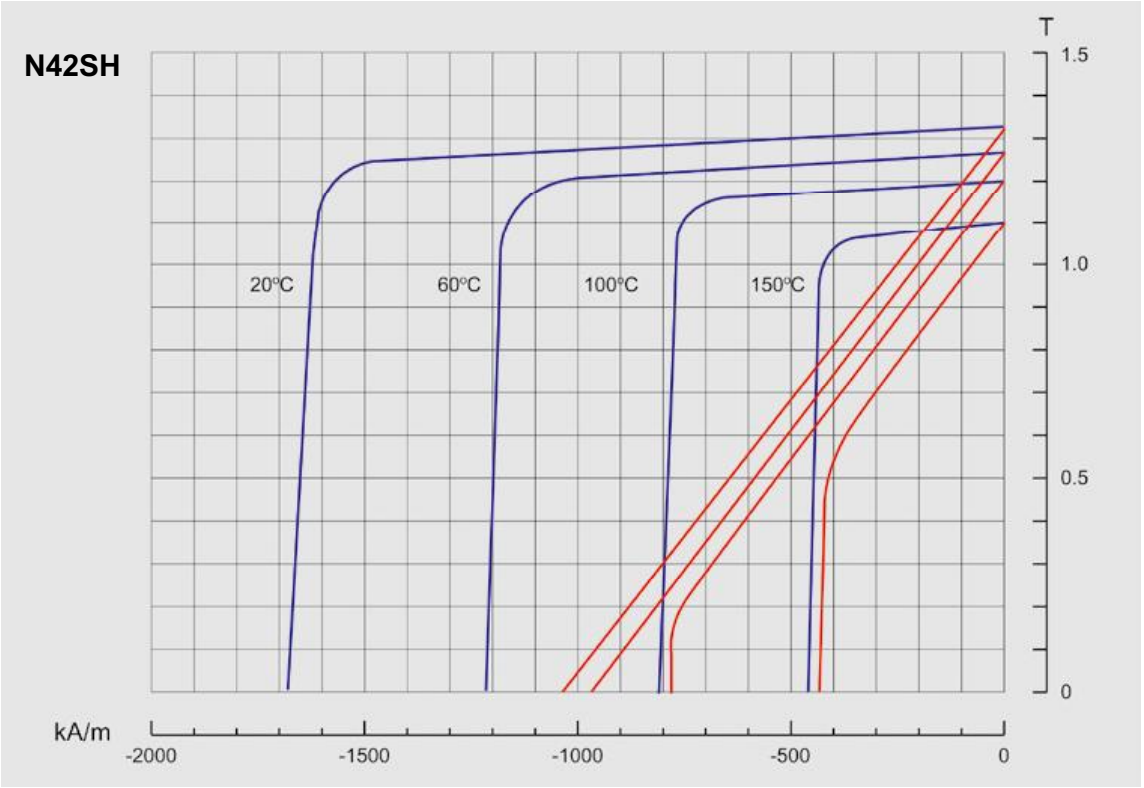

T
1.4
1.0
0.5
0
20°C
60°C
100°C
150°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

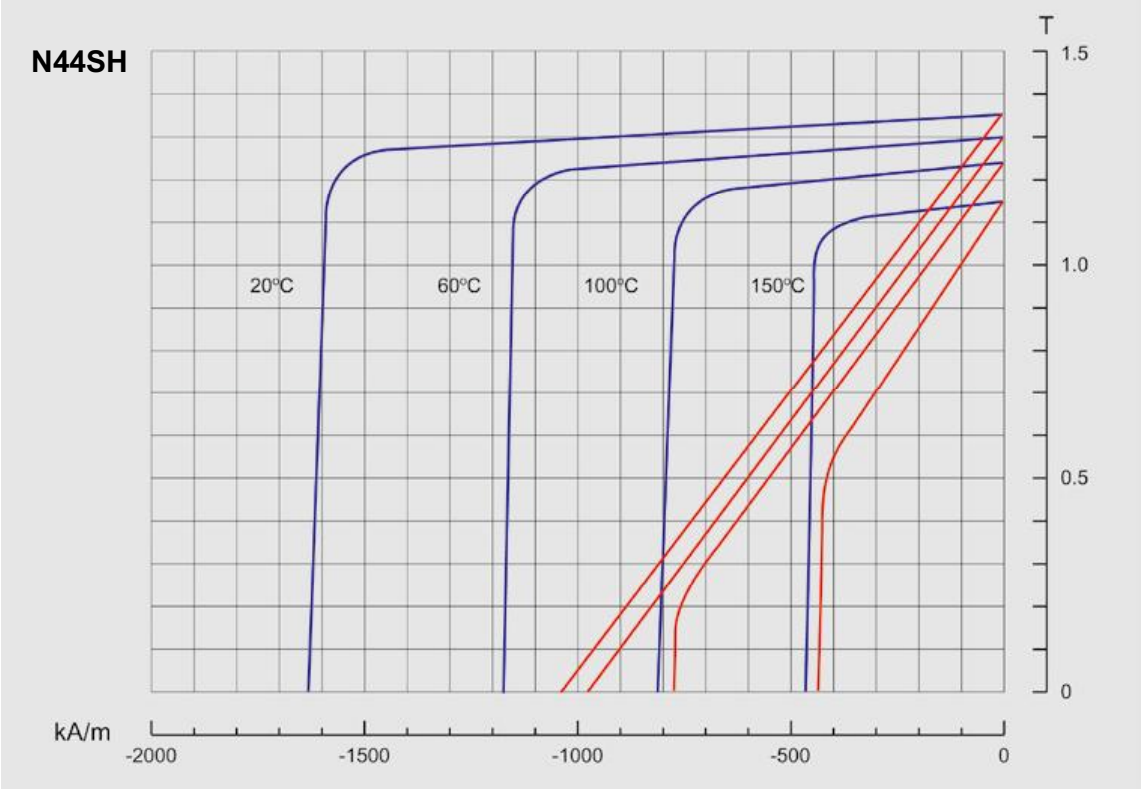




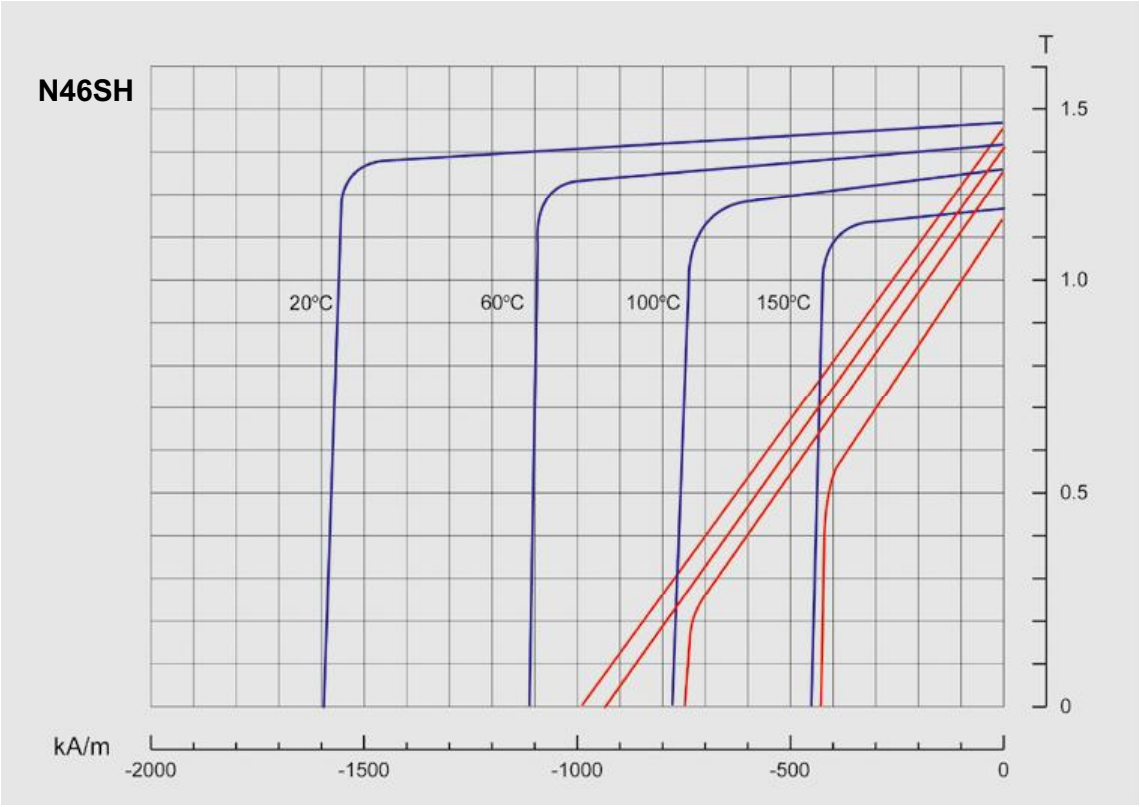
N42SH

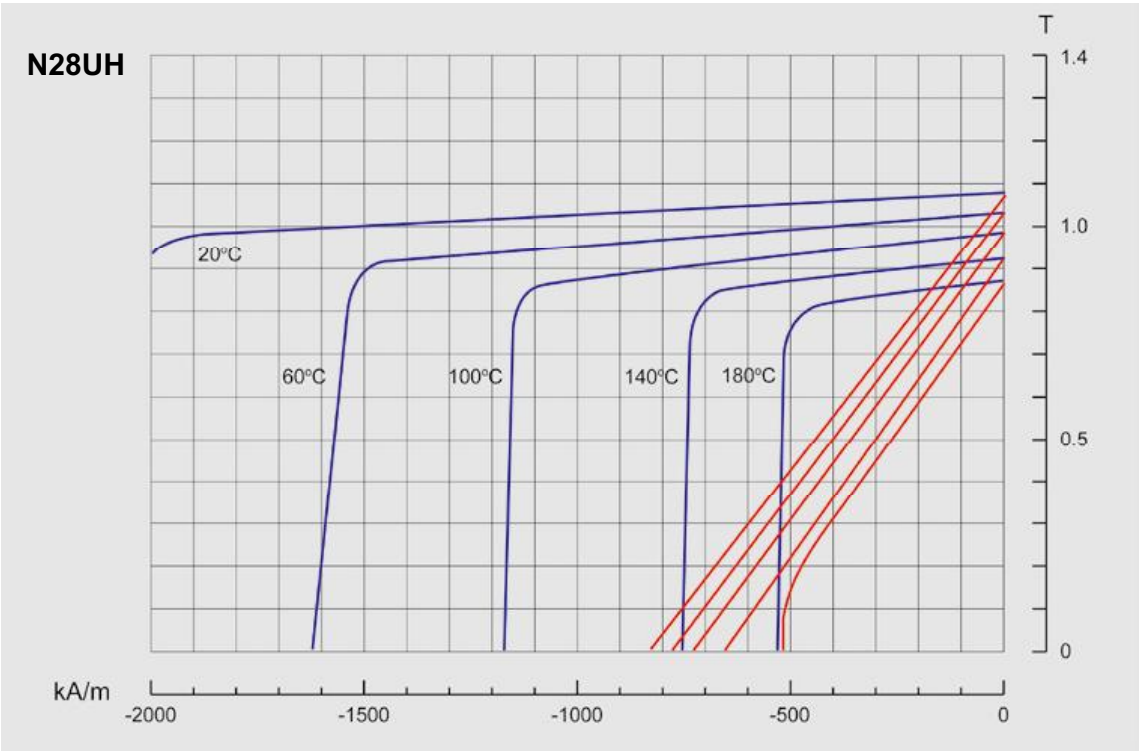

T
1.5
1.0
0.5
0
20°C
60°C
100°C
150°C
kA/m
-2000
-1500
-1000
-500
0

N44SH

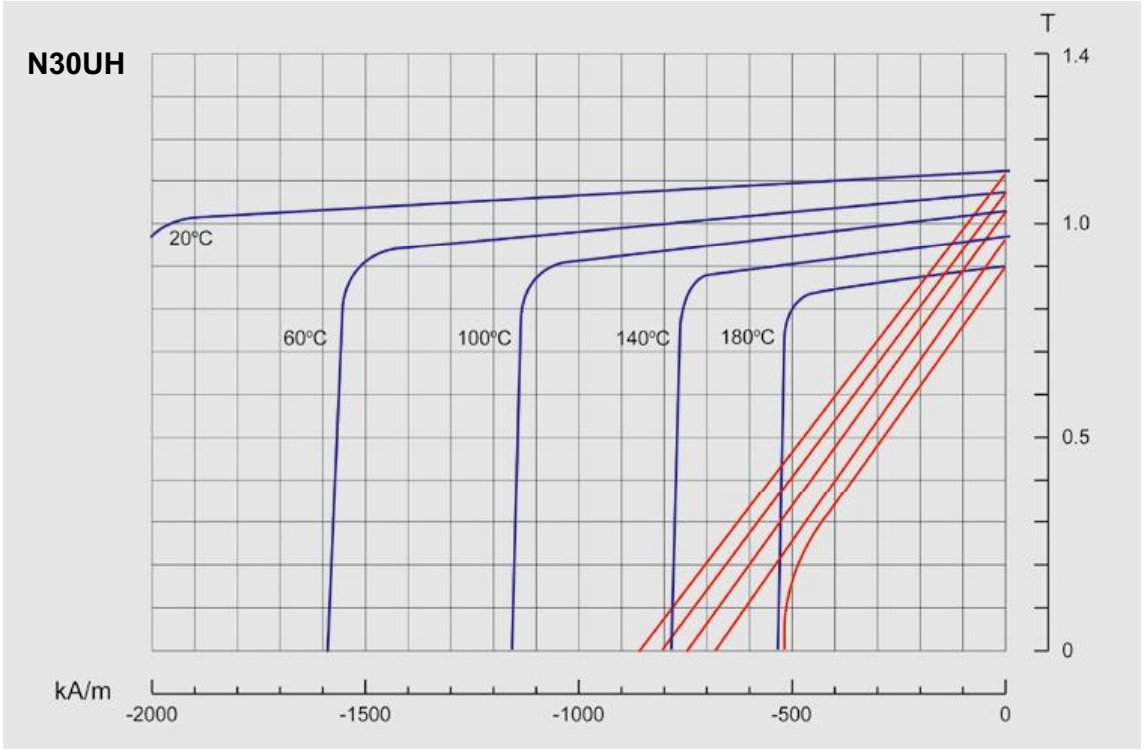

T
1.5
1.0
0.5
0
20°C
60°C
100°C
150°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

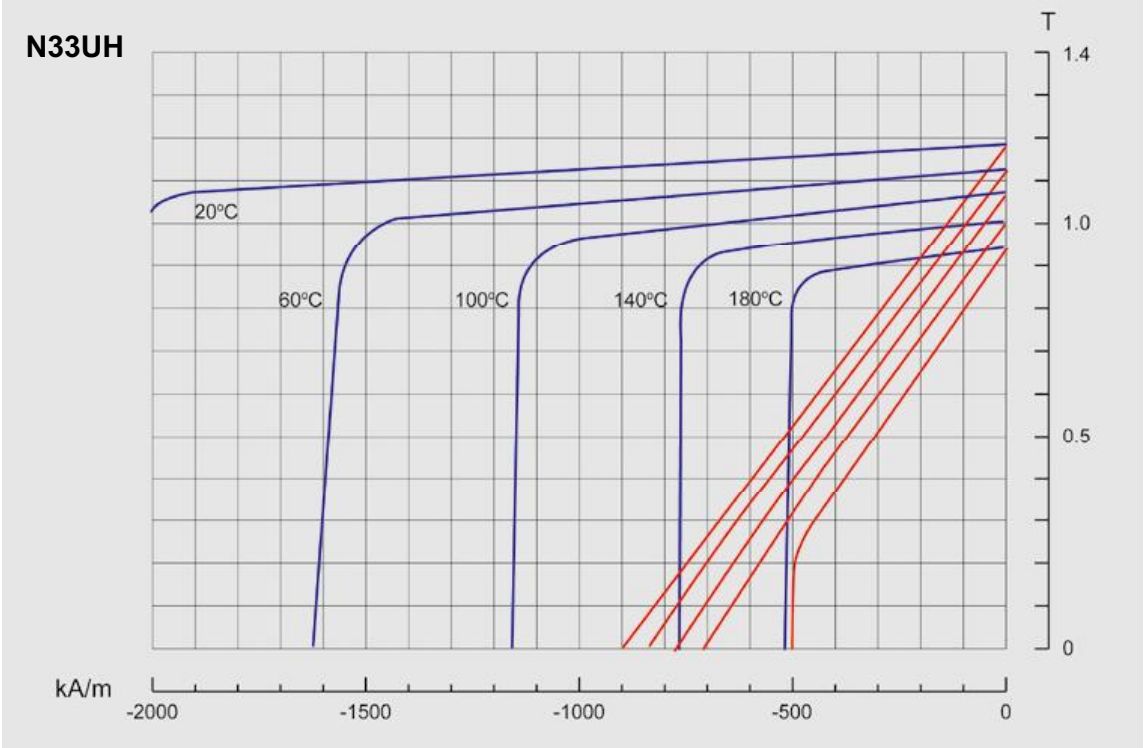




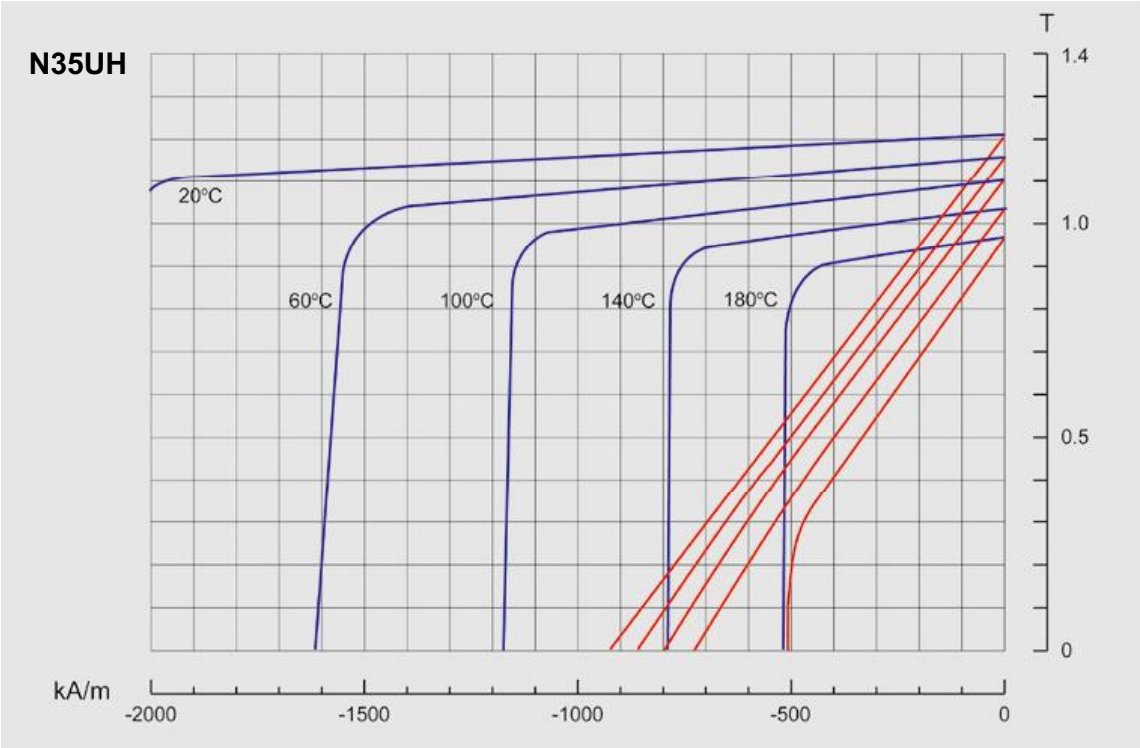
N30UH

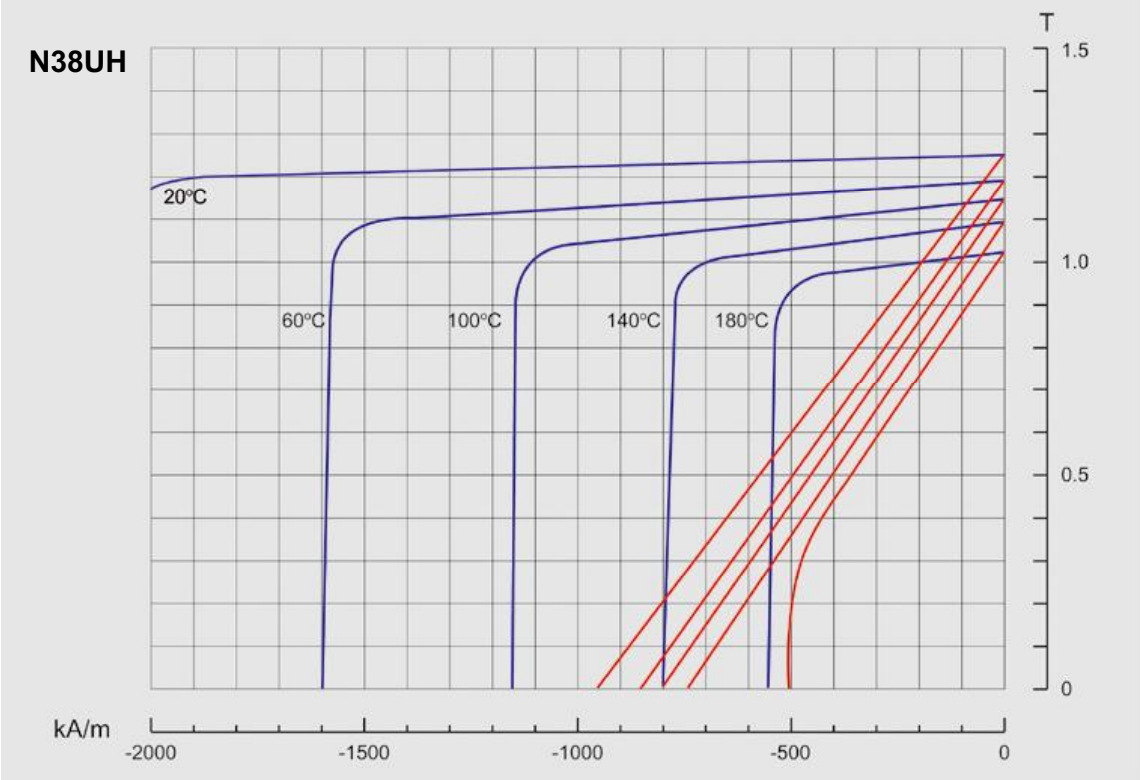

T
1.4
1.0
0.5
0
20°C
60°C
100°C
140°C
180°C
kA/m
-2000
-1500
-1000
-500
0

N33UH

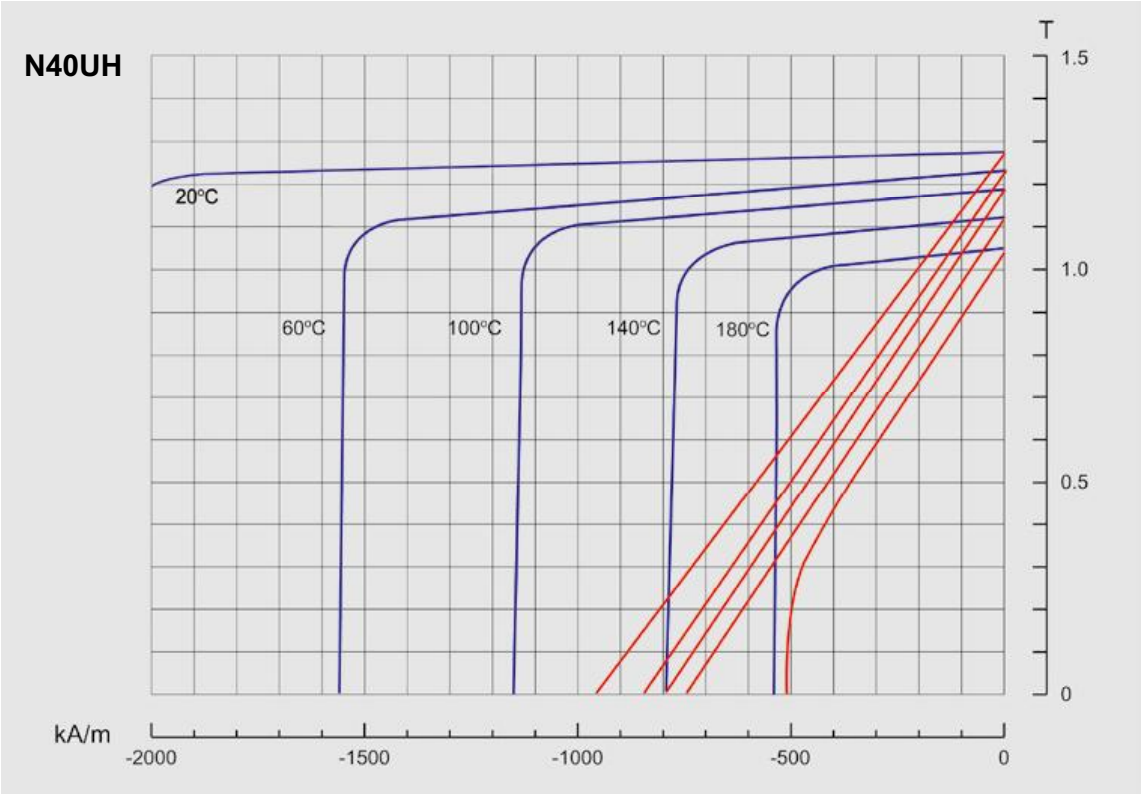

T
1.4
1.0
0.5
0
20°C
60°C
100°C
140°C
180°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

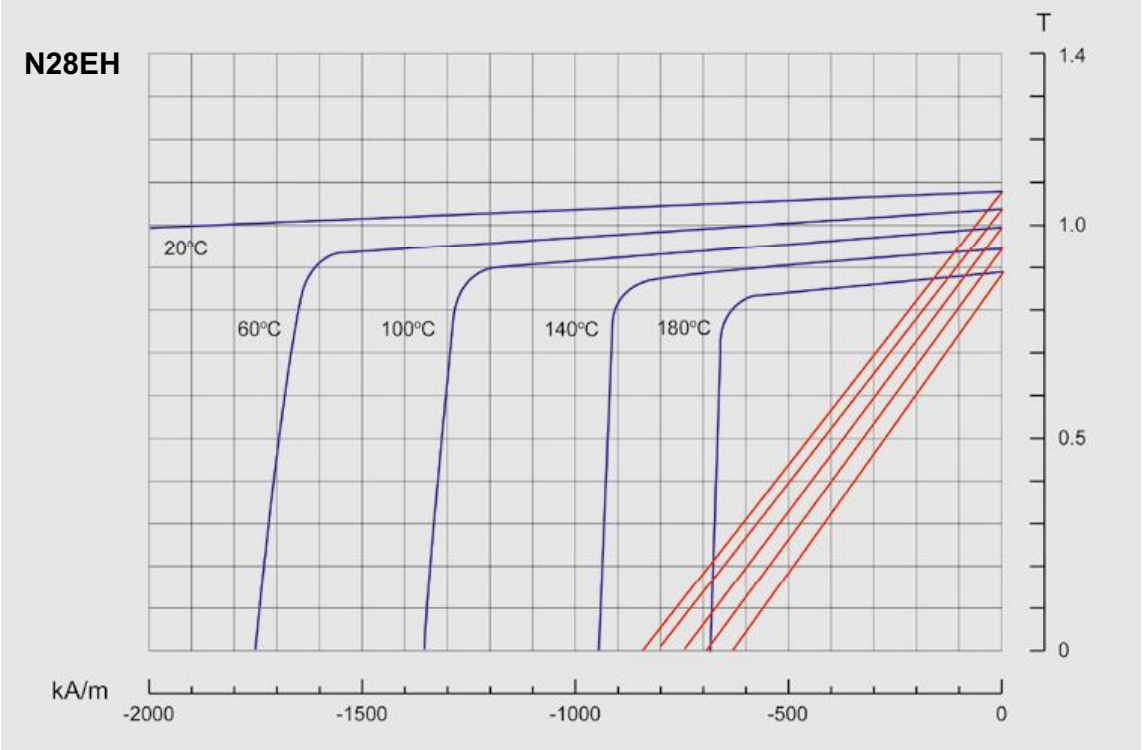




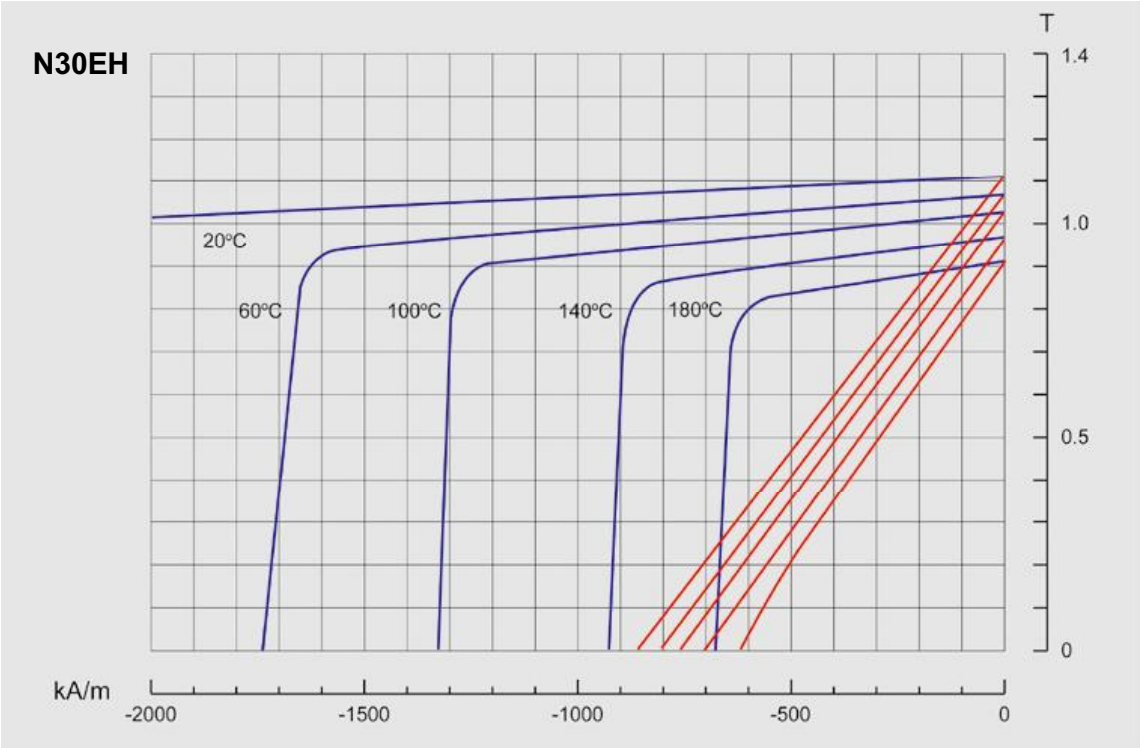
N40UH

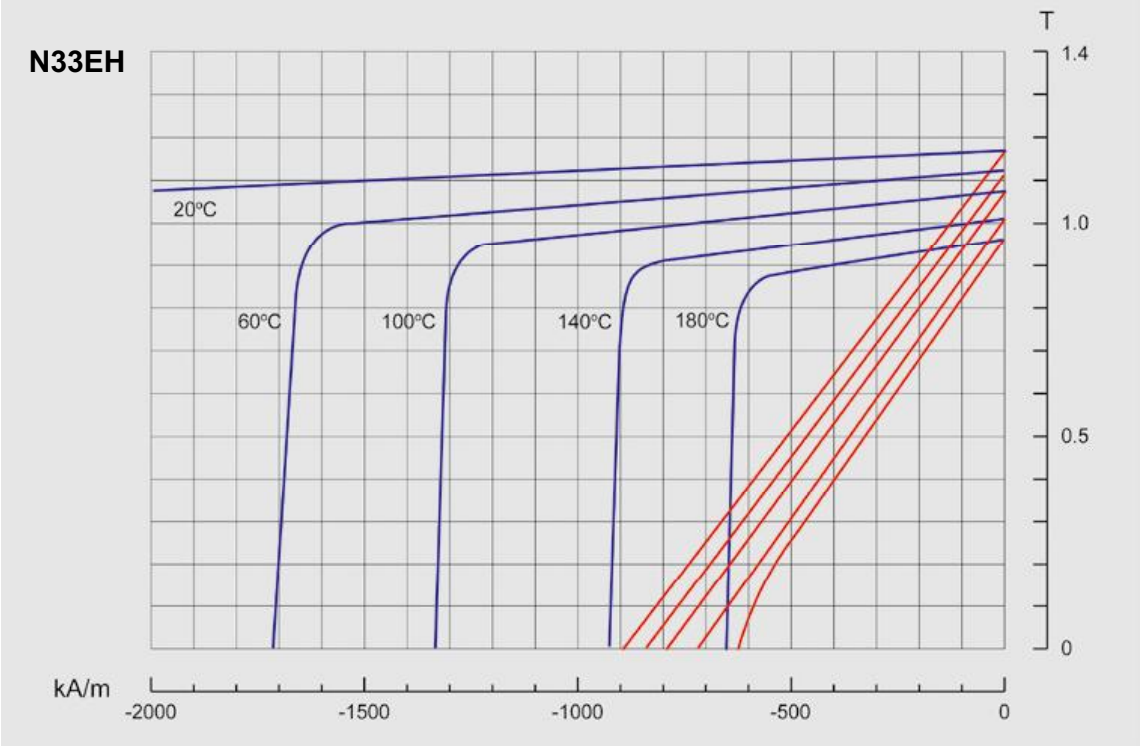

T
1.5
1.0
0.5
0
20°C
60°C
100°C
140°C
180°C
kA/m
-2000
-1500
-1000
-500
0

N28EH

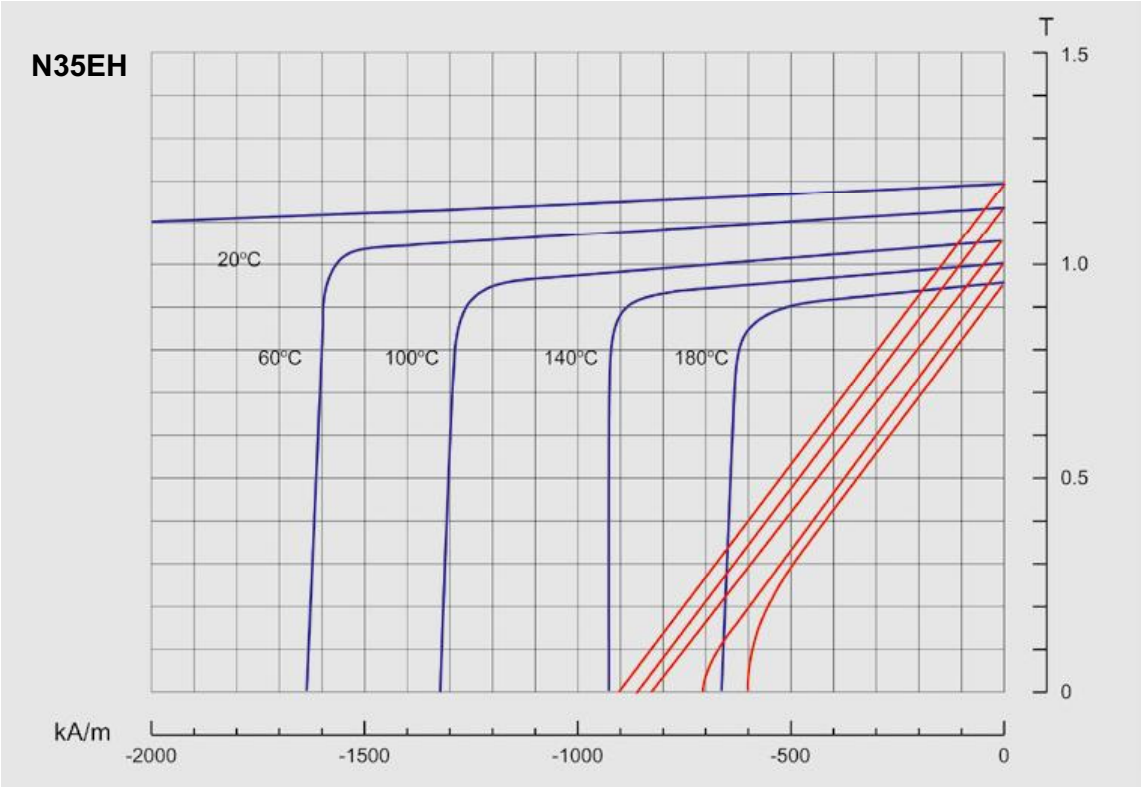

T
1.4
1.0
0.5
0
20°C
60°C
100°C
140°C
180°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

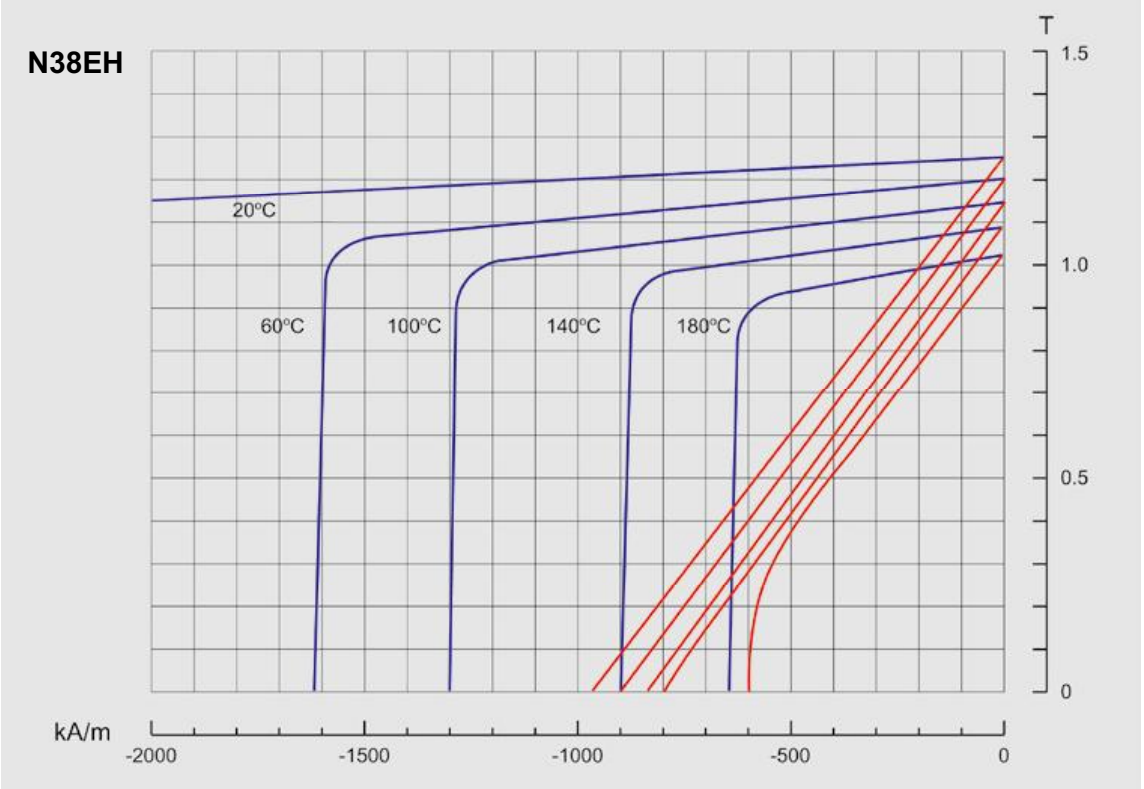




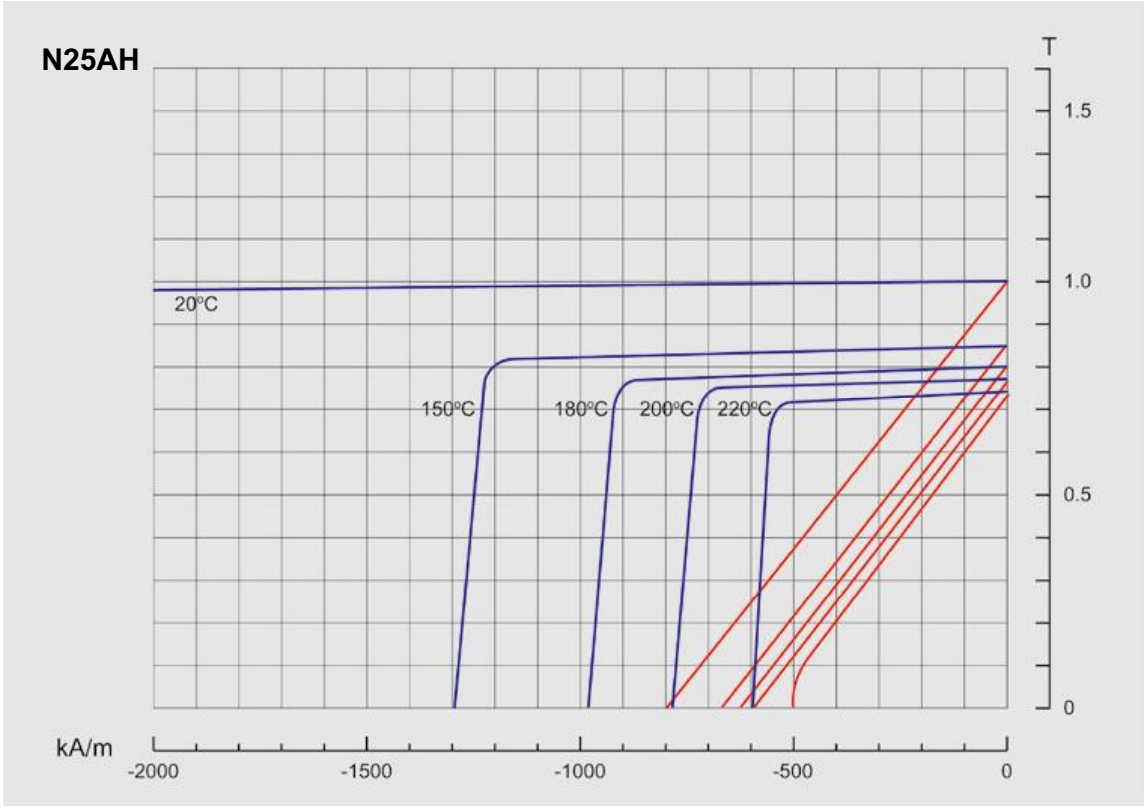
N35EH

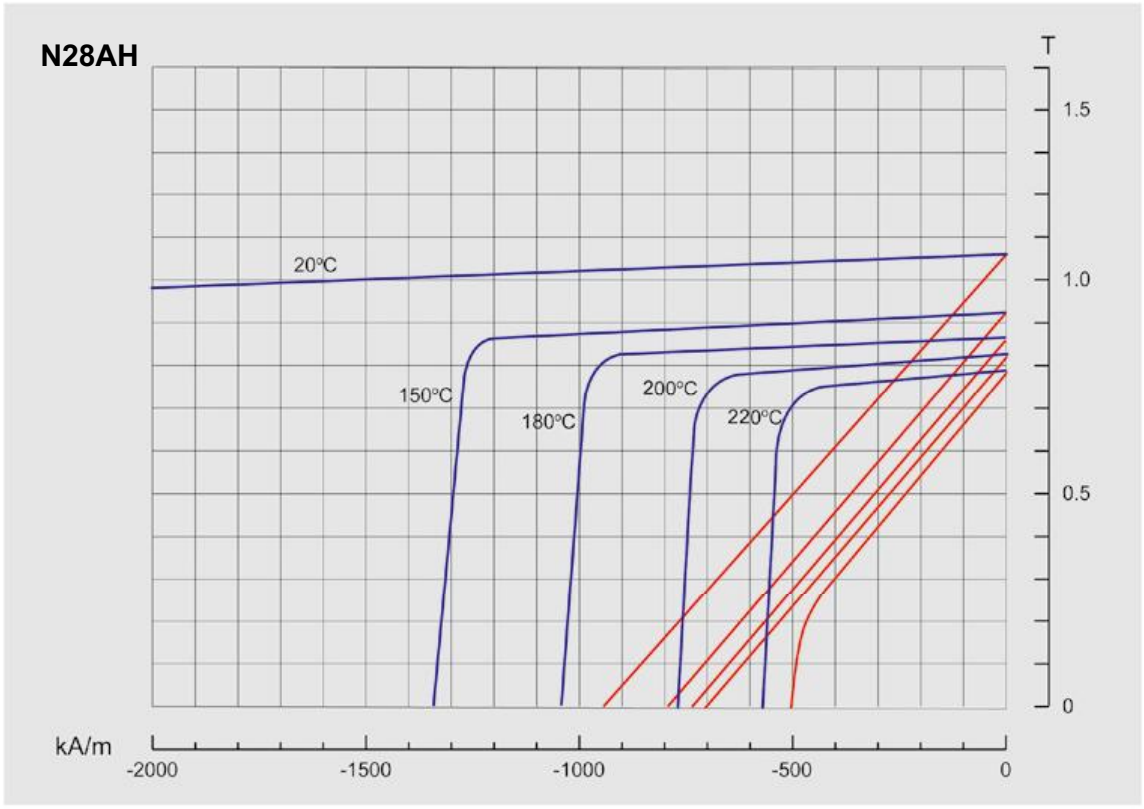

T
1.5
1.0
0.5
0
20°C
60°C
100°C
140°C
180°C
kA/m
-2000
-1500
-1000
-500
0

N38EH

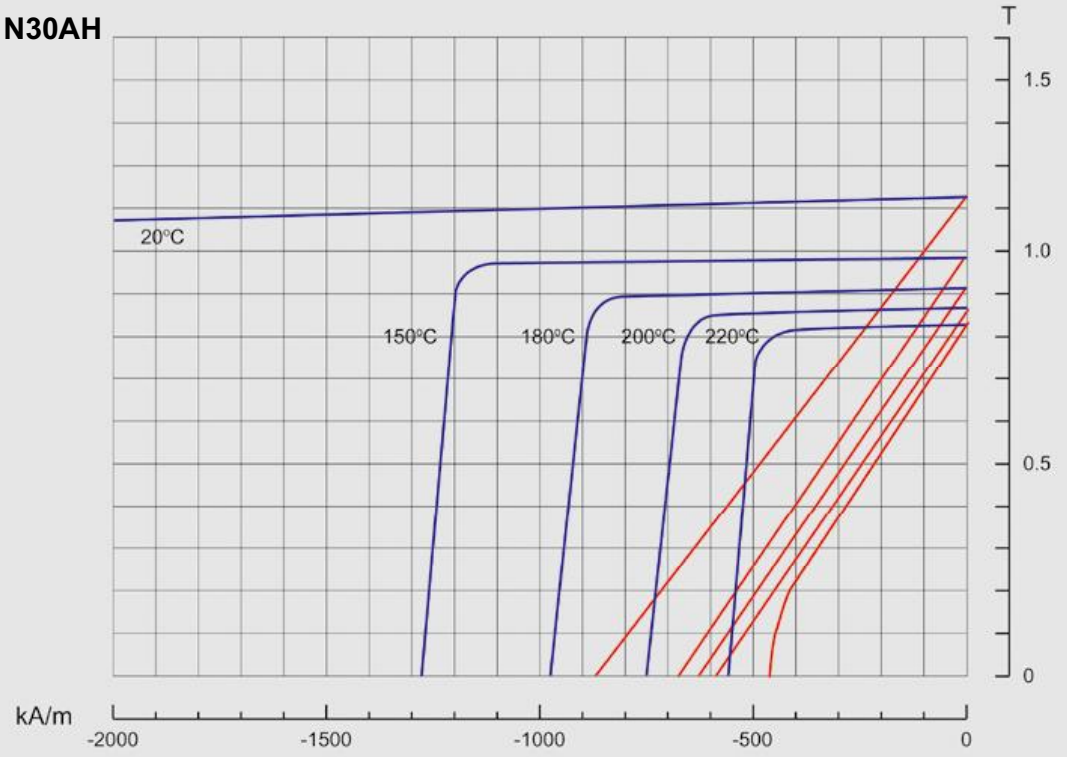

T
1.5
1.0
0.5
0
20°C
60°C
100°C
140°C
180°C
kA/m
-2000
-1500
-1000
-500
0

Demagnetisation curves

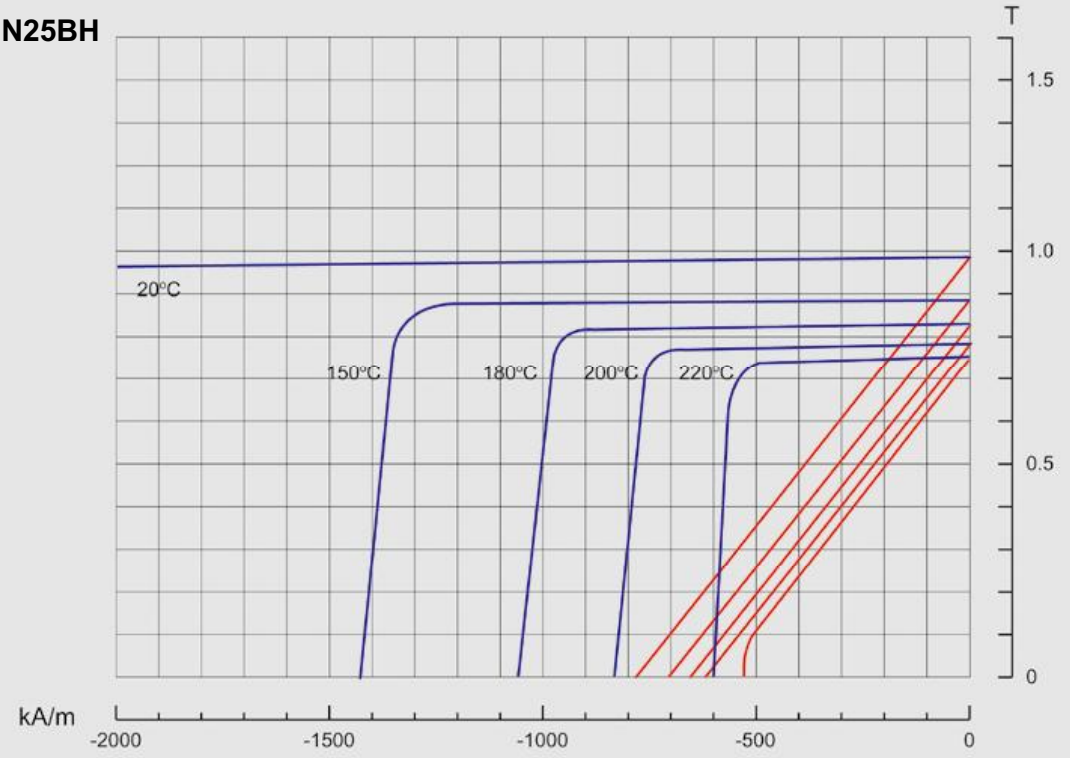




N30AH


T
1.5
1.0
0.5
0
20°C
150°C
180°C
200°C
220°C
kA/m
-2000
-1500
-1000
-500
0

N25BH


T
1.5
1.0
0.5
0
20°C
150°C
180°C
200°C
220°C
kA/m
-2000
-1500
-1000
-500
0

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