

MAGNETIC PROPERTIES OF GRAIN BOUNDARY DIFFUSION SERIES (20 °C)

version Dec 2025

Grade	Remanence		Normal coercivity		Intrinsic coercivity	Energy density		Temperature coefficient				Max. operating temp. °C
	Br mT		Hcb kA/m		Hcj kA/m	BH(max) kJ/m3		20~100℃		20~150℃ -%/℃		
	min	typ	min	typ	min	min	typ	Tc(Br) typ	Tc(Hcj) typ	Tc(Br) typ	Tc(Hcj) typ	
L58M	1475	1500	1015	1025	1035	412	426	0,12	0,72			90
L52H	1420	1450	1076	1099	1353	384	400	0,12	0,66	0,1	0,6	120
L54H	1440	1470	1091	1114	1353	395	411	0,12	0,66	0,1	0,6	120
L56H	1460	1490	1107	1129	1353	406	423	0,12	0,66	0,1	0,6	120
L58H	1475	1500	1118	1137	1353	414	428	0,12	0,66	0,1	0,6	120
L40SH	1260	1300	959	990	1592	300	319	0,12	0,62	0,1	0,56	150
L42SH	1300	1330	990	1013	1592	323	338	0,12	0,62	0,1	0,56	150
L44SH	1320	1350	1005	1028	1592	333	348	0,12	0,62	0,1	0,56	150
L46SH	1350	1380	1028	1051	1592	348	364	0,12	0,62	0,1	0,56	150
L48SH	1370	1410	1043	1074	1592	358	380	0,115	0,62	0,12	0,56	150
L50SH	1390	1430	1058	1089	1592	370	391	0,115	0,62	0,12	0,56	150
L52SH	1420	1450	1081	1104	1592	386	402	0,115	0,62	0,12	0,56	150
L54SH	1440	1470	1097	1119	1592	397	413	0,115	0,62	0,12	0,56	150
L56SH	1460	1490	1112	1135	1592	408	425	0,115	0,62	0,12	0,56	150
L58SH	1475	1500	1123	1142	1592	416	430	0,115	0,62	0,12	0,56	150
L35UH	1170	1220	895	934	1989	259	281	0,11	0,58	0,115	0,52	180
L38UH	1220	1260	934	964	1989	281	300	0,11	0,58	0,115	0,52	180
L40UH	1260	1300	964	995	1989	300	319	0,11	0,58	0,115	0,52	180
L42UH	1300	1330	995	1018	1989	323	338	0,11	0,58	0,115	0,52	180
L44UH	1320	1350	1010	1033	1989	333	348	0,110	0,58	0,115	0,52	180
L46UH	1350	1380	1033	1056	1989	348	364	0,110	0,58	0,115	0,52	180
L48UH	1370	1410	1048	1079	1989	358	380	0,110	0,58	0,115	0,52	180
L50UH	1390	1430	1064	1094	1989	371	393	0,110	0,58	0,115	0,52	180
L52UH	1420	1450	1087	1109	1989	388	404	0,11	0,58	0,115	0,52	180
L54UH	1440	1470	1102	1125	1989	399	415	0,11	0,58	0,115	0,52	180
L33EH	1140	1170	872	895	2387	246	259	0,105	0,54	0,110	0,48	200
L35EH	1170	1220	895	934	2387	259	281	0,105	0,54	0,110	0,48	200
L38EH	1220	1260	934	964	2387	281	300	0,105	0,54	0,11	0,48	200
L40EH	1260	1300	964	995	2387	300	319	0,105	0,54	0,11	0,48	200
L42EH	1300	1330	995	1018	2387	323	338	0,105	0,54	0,11	0,48	200
L44EH	1320	1350	1010	1033	2387	333	348	0,105	0,54	0,11	0,48	200
L46EH	1350	1380	1033	1056	2387	348	364	0,105	0,54	0,11	0,48	200
L48EH	1370	1410	1048	1079	2387	358	380	0,105	0,54	0,11	0,48	200
L50EH	1390	1430	1064	1094	2387	371	393	0,105	0,54	0,11	0,48	200
L52EH*	1420	1450	1087	1109	2387	388	404	0,105	0,54	0,11	0,48	200
L28AH	1040	1080	796	826	2787	204	220	0,105	0,5	0,11	0,45	220
L30AH	1080	1120	826	857	2787	220	237	0,105	0,5	0,11	0,45	220
L33AH	1140	1170	872	895	2787	246	259	0,105	0,5	0,11	0,45	220
L35AH	1170	1220	895	934	2787	259	281	0,105	0,5	0,11	0,45	220
L38AH	1220	1260	934	964	2787	281	300	0,105	0,5	0,11	0,45	220
L40AH	1260	1300	964	995	2787	300	319	0,105	0,5	0,11	0,45	220
L42AH	1300	1330	995	1018	2787	323	338	0,105	0,5	0,11	0,45	220
L44AH	1320	1350	1010	1033	2787	333	348	0,105	0,5	0,11	0,45	220
L46AH*	1350	1380	1020	1040	2787	348	364	0,105	0,5	0,11	0,45	220

Remark:

- 1) The max working temperature is only for reference, is depended on the circuit the magnet is operating in.
- 2) Customers are recommended to consult us on application involving temperature near to max working temperature.
- 3) When $B/\mu_0 \cdot H=1$, the magnet is operated at mentioned max. working temperature, the irreversible losses less than 5% is guaranteed.
- 4) "L" means GBD process.
- 5) * is under development.
- 6) /S means corrosion stable material, weight loss after 7 days PCT less than 3mg/cm².
- 7) /ST means corrosion stable material + thermal stable material (with defined Hcj value at high temp.) Weight loss after 7 days PCT less than 3mg/cm².

Important notice: Dimensions and shape of the magnet, in combination with required manufacturing processes, may cause the magnetic and physical characteristics to vary from typical values. Therefore, all data presented in this document are for general reference only and should not be relied upon to represent standard characteristics, nor are they guaranteed upon use. Bakker Magnetics reserves the right to change information in this document, including magnet performance standards, specifications, and characteristics without notice.

MAGNETIC PROPERTIES OF CORROSION STABLE SERIES (20°C)

Grade	Remanence		Normal coercivity		Intrinsic coercivity	Energy density		Temperature coefficient				Max. operating temp. °C
	Br mT		Hcb kA/m		Hcj kA/m	BH(max) kJ/m3		20~100℃		20~150℃		
	min	typ	min	typ	min	min	typ	Tc(Br) typ	Tc(Hcj) typ	Tc(Br) typ	Tc(Hcj) typ	
N30SH/S	1080	1120	822	853	1592	220	237	0,115	0,62	0,12	0,56	150
N33SH/S	1140	1170	868	891	1592	246	259	0,115	0,62	0,12	0,56	150
N35SH/S	1170	1220	891	929	1592	259	281	0,115	0,62	0,12	0,56	150
N38SH/S	1220	1260	929	959	1592	281	300	0,115	0,62	0,12	0,56	150
N40SH/S	1260	1300	959	990	1592	300	319	0,115	0,62	0,12	0,56	150
N42SH/S	1300	1330	990	1013	1592	323	338	0,115	0,62	0,12	0,56	150
N44SH/S	1320	1350	1005	1028	1592	333	348	0,115	0,62	0,12	0,56	150
N46SH/S	1350	1380	1028	1051	1592	348	364	0,115	0,62	0,12	0,56	150
N48SH/S	1370	1410	1043	1074	1592	358	380	0,115	0,62	0,12	0,56	150
N50SH/S	1390	1430	1058	1089	1592	370	391	0,115	0,62	0,12	0,56	150
N52SH/S	1420	1450	1081	1104	1592	386	402	0,115	0,62	0,12	0,56	150
N54SH/S	1440	1470	1097	1119	1592	397	413	0,115	0,62	0,12	0,56	150
N56SH/S*	1460	1490	1112	1135	1592	408	425	0,115	0,62	0,12	0,56	150
N28UH/S	1040	1080	796	826	1989	204	220	0,110	0,58	0,115	0,52	180
N30UH/S	1080	1120	826	857	1989	220	237	0,110	0,58	0,115	0,52	180
N33UH/S	1140	1170	872	895	1989	246	259	0,110	0,58	0,115	0,52	180
N35UH/S	1170	1220	895	934	1989	259	281	0,110	0,58	0,115	0,52	180
N38UH/S	1220	1260	934	964	1989	281	300	0,110	0,58	0,115	0,52	180
N40UH/S	1260	1300	964	995	1989	300	319	0,110	0,58	0,115	0,52	180
N42UH/S	1300	1330	995	1018	1989	323	338	0,110	0,58	0,115	0,52	180
N44UH/S	1320	1350	1010	1033	1989	333	348	0,110	0,58	0,115	0,52	180
N46UH/S	1350	1380	1033	1056	1989	348	364	0,110	0,58	0,115	0,52	180
N48UH/S	1370	1410	1048	1079	1989	358	380	0,110	0,58	0,115	0,52	180
N50UH/S*	1390	1430	1064	1094	1989	371	393	0,110	0,58	0,115	0,52	180
N28EH/S	1040	1080	796	826	2387	204	220	0,105	0,54	0,110	0,48	200
N30EH/S	1080	1120	826	857	2387	220	237	0,105	0,54	0,110	0,48	200
N33EH/S	1140	1170	872	895	2387	246	259	0,105	0,54	0,110	0,48	200
N35EH/S	1170	1220	895	934	2387	259	281	0,105	0,54	0,110	0,48	200
N38EH/S	1220	1260	934	964	2387	281	300	0,105	0,54	0,110	0,48	200
N40EH/S	1260	1300	964	995	2387	300	319	0,105	0,54	0,110	0,48	200
N42EH/S	1300	1330	995	1018	2387	323	338	0,105	0,54	0,110	0,48	200
N44EH/S*	1320	1350	1010	1033	2387	333	348	0,105	0,54	0,110	0,48	200
N28AH/S	1040	1080	796	826	2787	204	220	0,105	0,50	0,110	0,45	220
N30AH/S	1080	1120	826	857	2787	220	237	0,105	0,50	0,110	0,45	220
N33AH/S	1140	1170	872	895	2787	246	259	0,105	0,50	0,110	0,45	220
N35AH/S	1170	1220	895	934	2787	259	281	0,105	0,50	0,110	0,45	220
N38AH/S	1220	1260	934	964	2787	281	300	0,105	0,50	0,110	0,45	220

- Remark:
- 1) The max working temperature is only for reference, is depended on the circuit the magnet is operating in.
 - 2) Customers are recommended to consult us on application involving temperature near to max working temperature.
 - 3) When $B/\mu_0 \cdot H=1$, the magnet is operated at mentioned max. working temperature, the irreversible losses less than 5% is guaranteed.
 - 4) "L" means GBD process.
 - 5) "CE" means containing Cerium in magnet, min.order quantity reaches 500kgs
 - 6) /S means corrosion stable material, weight loss after 7 days PCT less than 3mg/cm².
 - 7) /ST means corrosion stable material + thermal stable material (with defined Hcj value at high temp.) Weight loss after 7 days PCT less than 3mg/cm².
 - 8) * is under development.