



MagDev
Limited

Permanent Magnets

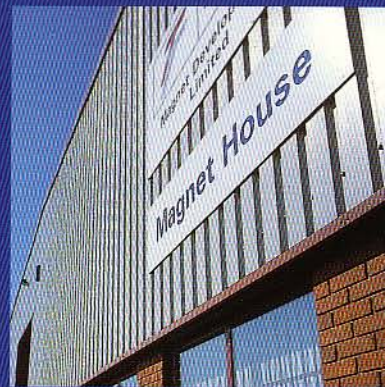


MMG Magdev Limited **the best in their field**

Magnets are often a relatively low cost part of a great many pieces of equipment but their importance is extremely high. Which is why when magnets matter, people talk to Magnet Developments.

Magnet Developments Ltd have been specialists in permanent magnets for over 20 years supplying Sintered Ferrite, Alnico, Samarium Cobalt, Neodymium Iron Boron, Bonded magnets, Injection moulded magnets, Flexible magnets

But it is expertise rather than just products that makes Magnet Developments special. Our research, our quality control and our service makes us the choice of customers as varied as aircraft manufacturers, F1 teams, Telecommunications companies, test instrument makers and automated banking specialists. It is also the reason why we are partners in leading edge research projects at universities like Milan, Strasbourg and Liverpool. Magnet developments have some of the best application engineers in the business to help you at the beginning and ISO 9002 and "Just in Time" delivery to help keep your project on track. In short, we give you solutions not just magnets



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Certificate No: 9430

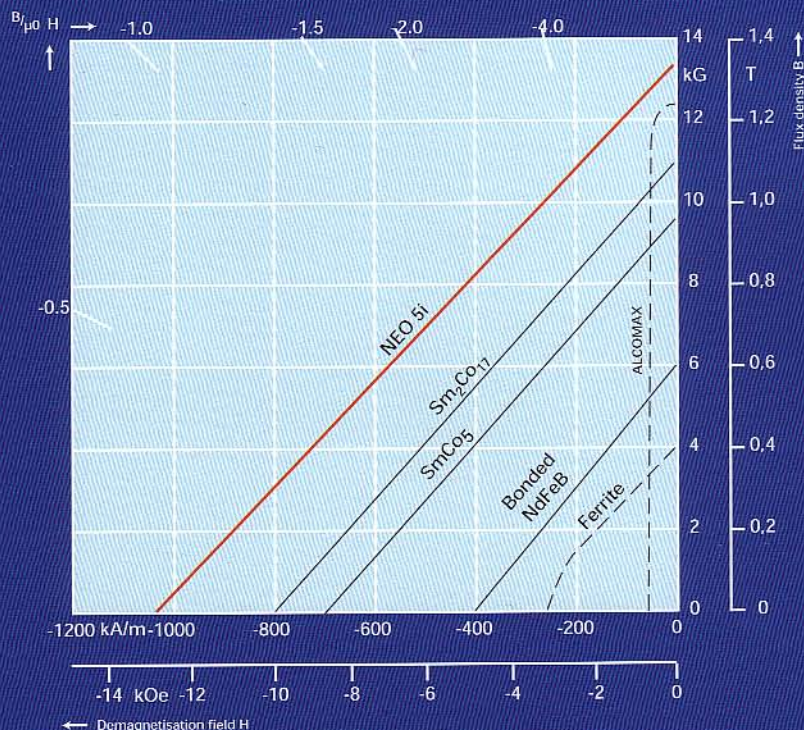
Neodymium-Iron-Boron

Due to over 15 years of continuous development the Neodymium Iron Boron Family has evolved over 30 grades based on the maximum energy product and operating temperature. Some grades have become obsolete as laboratory curios become factory product. Some factories are now claiming operating temperatures as low as 50°C and up to 230°C for specialist use. MDL source from several factories and a summary of the range of grades is shown below. Please note that not all sizes are available in all grades. It is wise to seek assistance during the concept stage of product design to establish what we can offer.

Typical Magnet and Physical Specifications

Grade Type	Br kG min/typ	bHc kOe min/typ	JHc kOe Oersted	BHMax min/typ	Max Temp °C	Comments
N35	11.7/12.1	10.8/11.4	>12	33/35	80	A basic, low cost magnet offering good strength at room temp
N30H	10.8/11.2	10.1/10.6	>17	28/30	120	A basic grade useful to 120°C but at the expense of some energy
N33H	11.4/11.7	10.3/11.0	>17	31/33	120	Slightly higher energy than N30H
N35H	11.7/12.1	10.8/11.4	>17	33/35	120	Good strength to 120°C becoming our standard grade
N44H	12.9/13.6	12.3/13.1	>16	40/44	120	Our top energy grade used for cutting small orders and special sizes
N27SH	10.2/10.6	9.8/10.3	>20	25/27	150	Higher temp use at the expense of more energy
N30UH	11.0/11.6	10.3/11.1	>27	28/32	180	Highest temp grade block for cutting

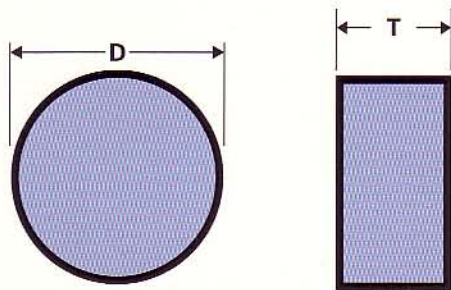
Density g/cc	7.5	Young's Modulus	kN/mm ²	150
Curie Temp. °C	310	Bending Strength	N/mm ²	250
Spec. Res ~Ω mm ² /m	1.5	Compressive Strength	N/mm ²	1000
Hardness (Vickers)	580	Thermal Conductivity	W/m°C	9



Typical demagnetisation curves of Neodymium-Iron-Boron at room temperature

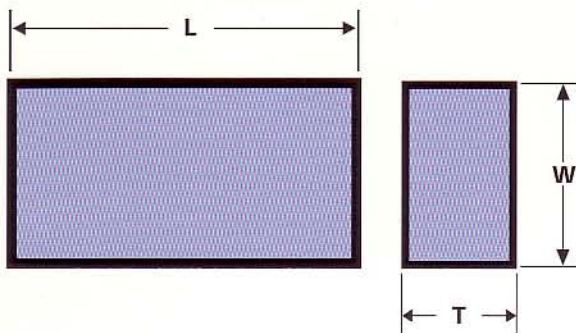
Neodymium - Iron - Boron

Discs



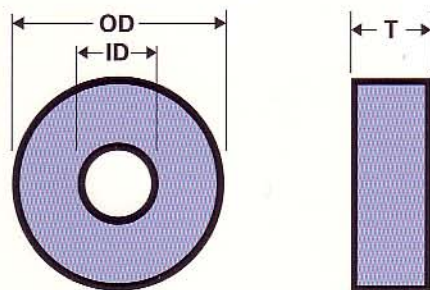
PART NUMBER	SIZE (mm)		Coating	Grade
	D	T		
DCNI 00959/N	3	1	Nickel	N30H
DCNI 00962/N	3	2	Nickel	N30H
DCNI 02396/N	4	1	Nickel	N30H
DCNI 02988/N	4	1.5	Nickel	N30H
DCNI 01618/N	4	3	Nickel	N30H
DCNI 02657/N	4	5	Nickel	N27SH
DCNI 00734/N	5	3	Nickel	N35H
DCNI 03783/N	6	1	Nickel	N33H
DCNI 00886/N	6	2	Nickel	N35H
DCNI 04160/N	6	5	Nickel	N35H
DCNI 03221/N	6	6	Nickel	N35H
DCNI 00678/N	9	5	Nickel	N35H
DCNI 00675/N	10	3	Nickel	N35H
DCNI 03446/N	10	4	Nickel	N33H
DCNI 00626/N	10	5	Nickel	N33H
DCNI 02850/N	15	1.5	Nickel	N35H
DCNI 00677/N	15	3	Nickel	N35H
DCNI 00627/N	20	5	Nickel	N33H
DCNI 03950/N	22	2	Nickel	N35
DCNI 03756/N	24	20	Nickel	N38
DCNI 03949/N	25	3.5	Nickel	N35
DCNI 03140/N	33	10	Nickel	N27SH

Bars & Blocks



PART NUMBER	SIZE (mm)			Coating	Grade
	L	W	T		
BLNI 00617/P	3	3	1	Parylene	N33H
BLNI 01113/T	3	3	1	Tin	N30SH
BLNI 00618/P	5	5	3	Parylene	N33H
BLNI 00659	6	4	1.5	uncoated	N33H
BLNI 03688/N	7.5	5.8	1.7	Nickel	N35
BLNI 03510/N	9.2	9.2	5.55	Nickel	N33SH
BLNI 00619/N	10	10	3	Nickel	N35H
BLNI 03511/N	20	9.2	5.55	Nickel	N33H
BLNI 01054/N	30	10	5	Nickel	N35H
BLNI 02648/N	40	10	5	Nickel	N33SH
BLNI 03763	50	50	12.5	uncoated	N35
BLNI 00893	63	36	6	uncoated	N35H
BLNI 00700	63	36	10	uncoated	N35H

Rings



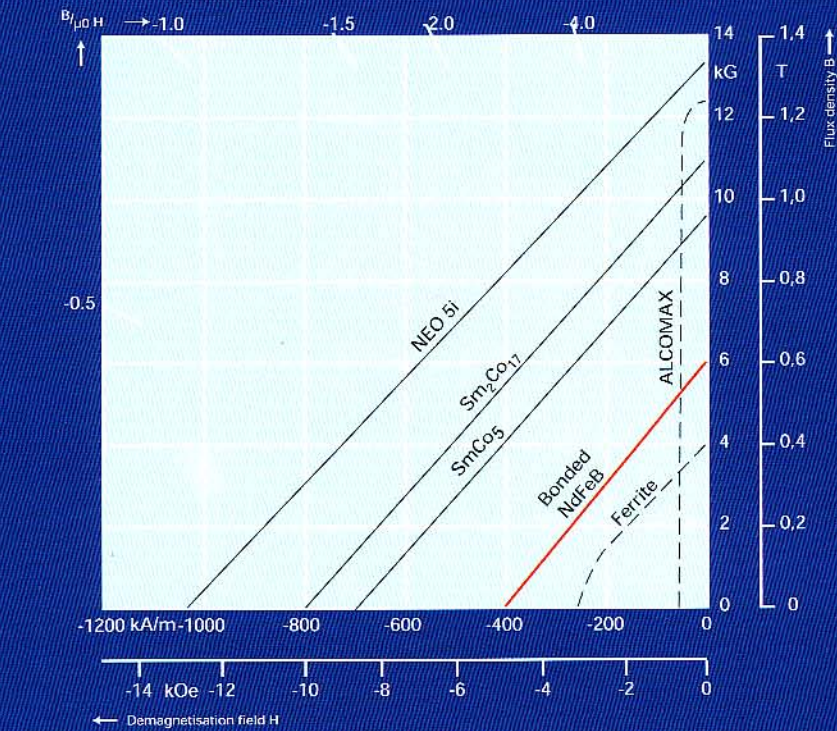
PART NUMBER	SIZE (mm)			Coating	Grade
	OD	ID	T		
RGNI 01090/N	8	4.3	4	Nickel	N33H
RGNI 00630/N	9.5	3.2	1.6	Nickel	N35H
RGNI 01094/N	12	6.5	2.5	Nickel	N33H
RGNI 01093	20	10	5	uncoated	N33H
RGNI 02069	20	12	3	uncoated	N33H
RGNI 02244/N	35.4	25	8.5	Nickel	N35
RGNI 01142	41	35	9	uncoated	N35H
RGNI 01143	48	42	9	uncoated	N35H
RGNI 03849/N	76	42	6	Nickel	N35
RGNI 04136/N	101	60	6	Nickel	N35H

Bonded Neodymium-Iron-Boron

This isotropic resin bonded Neodymium-Iron-Boron material offers a high energy product with an exceptional resistance to demagnetisation. Capable of operating up to 120°C, these magnets may be machined provided that adequate coolant is applied. Ring magnets may be machined from discs. Being isotropic, most shapes can be magnetised in any direction. Discs or rings may have either axial or diametric poles. Minimum field strength to magnetise to saturation is 3000kA/m (37500 Oe)

Typical Magnet and Physical Specifications

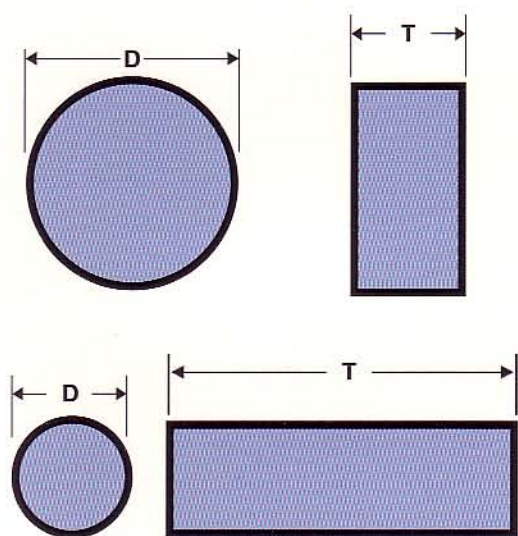
MDL Grade	DIN	Br		BH _{max}		H _c		BH _{max}		Magnetising Force (Minimum)		Max working temp °C	Density g/cc	Rev. Temp. Coef. of Br %/°C 20-100°C
		mT	Gauss	KA/m	Oersted	KA/m	Oersted	kJ/m ³	MGO	kA/m	Oersted			
PN1.8	60710p	600	6060	400	13750	1100	13750	60	7.5	3000	37500	120	6.8	PN1.8



Typical demagnetisation curves of Bonded Neodymium-Iron-Boron at room temperature

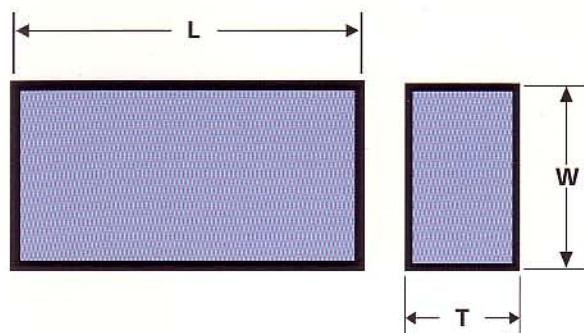
Bonded Neodymium - Iron - Boron

Discs & Rods



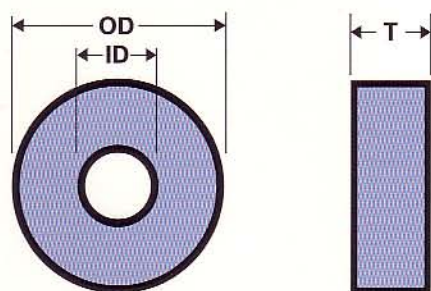
PART NUMBER	SIZE(mm)	
	D	T
DCPN 03303	2.4	1.4
DCPN 00931	6	2
DCPN 01028	7.5	7
DCPN 00932	10	10
DCPN 00933	12	6
DCPN 01029	12.5	5
DCPN 03942	12.5	10
DCPN 01425	15	3
DCPN 01496	15	7.7
DCPN 01140	20	5
DCPN 01030	20	7.7
DCPN 00935	20	10
DCPN 01031	25.5	5
DCPN 01032	30	10
RDPN 01248	5	7
RDPN 00927	5	10

Bars & Blocks



PART NUMBER	SIZE(mm)		
	L	W	T
BLPN 01905	4.5	4.5	4
BLPN 03360	10	3	2
BLPN 02502	10	3.5	2.4
BLPN 01185	10	5	3
BLPN 01033	30	30	10
BLPN 01241	42	25	4
BLPN 00936	42	25	14.3
BLPN 02695	50	50	6.5

Rings



Small quantities of ring sizes can be produced by machining from disc magnets. For large quantities a press tool is required. Please advise your preferred sizes to establish stock availability / lead times.

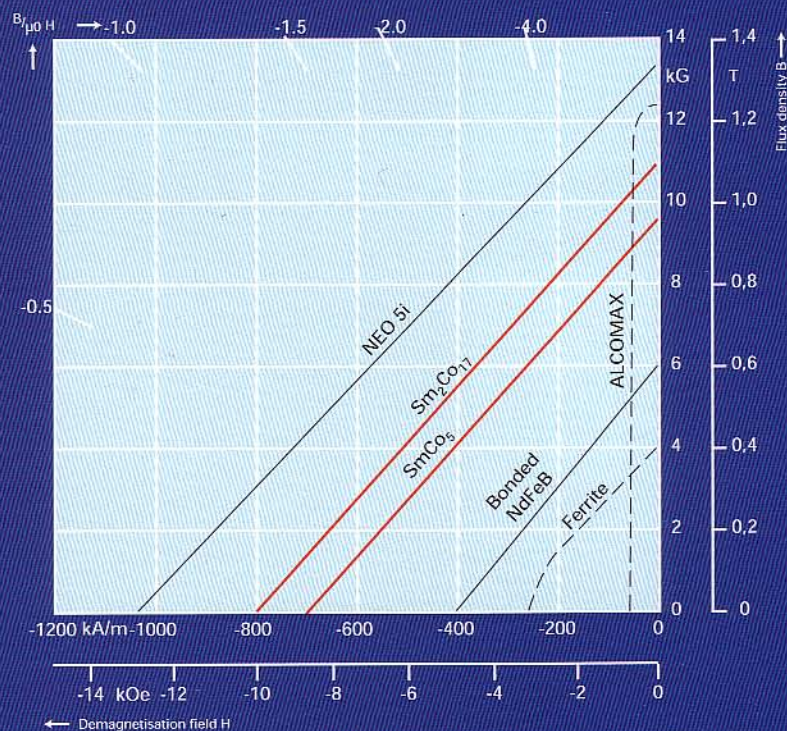
Sintered Rare Earth Cobalt

These sintered magnets are produced by a powder metallurgy process and provide an exceptionally high energy product and resistance to demagnetisation. They are normally supplied in a magnetised condition. Being very brittle, they must be handled with extreme care. Highly resistant to corrosion, they also have higher working temperatures than Neodymium-Iron-Boron; maximum for SmCo (1:5) is 250°C, and for SmCo (2:17) is 300°C.

Typical Magnet and Physical Specifications

MDL Grade	DIN	Br		BHc		jHc		BHmax		Magnetising Force (minimum)		Max working temp °C	Rev. Temp. Coeff. of Br %°C	
		mT	Gauss	kA/m	Oersted	kA/m	Oersted	kJ/m ³	MGO	kA/m	Oersted		20-100°C	20-150°C
SmCo 1:5	145/120	850	8500	600	7500	1200	15000	145	18	2000	25000	250	-0.04	-0.045
SmCo 1:5	190/95	1030	10300	600	7500	950	12000	190	24	3500	43750	300	-0.03	-0.035

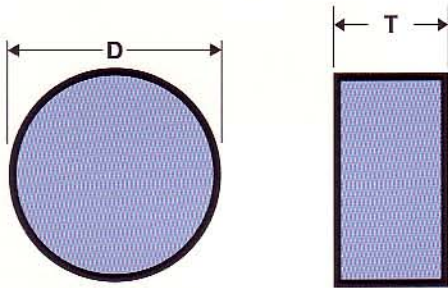
	1:5	2:17		1:5	2:17
Density g/cc	8.4	8.4	Young's Modulus	kN/mm ²	110 150
Curie Temp. °C	720	800	Bending Strength	N/mm ²	120 110
Spec. Res. -0.01 mm ² /m	0.8	0.8	Compressive Strength	N/mm ²	1000 800
Hardness (Vickers)	550	650	Thermal Conductivity	W/m°C	7 12



Typical demagnetisation curves of Rare Earth Cobalt at room temperature

Sintered Rare Earth Cobalt

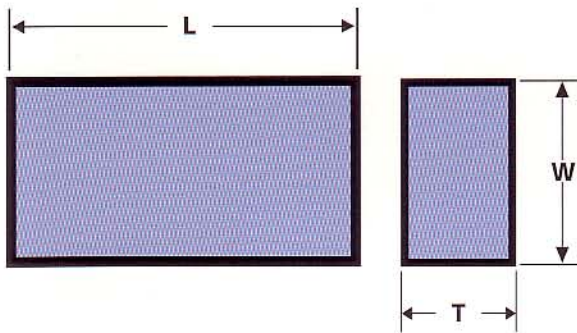
Discs & Rods



PART NUMBER	SIZE(mm)		Grade
	D	T	
DCSC 00517	3	2	SmCo 2:17
DCSC 02130	3.5	2.5	SmCo 2:17
DCSC 00520	5	2	SmCo 2:17
DCSC 02218	5	3	SmCo 2:17
DCSC 00522	5	5	SmCo 1:5
DCSC 00524	7	3	SmCo 2:17
DCSC 01454	7	4	SmCo 2:17
DCSC 01447	9	5	SmCo 2:17
DCSC 00527	10	3	SmCo 1:5
DCSC 01699	10	3	SmCo 2:17
DCSC 00528	10	5	SmCo 1:5
DCSC 01876	10	6	SmCo 2:17
DCSC 01471	12.5	5	SmCo 2:17
DCSC 00529	15	3	SmCo 2:17
DCSC 01853	15	5	SmCo 2:17
DCSC 01875	20	5	SmCo 2:17
DCSC 01405	25	7	SmCo 2:17
DCSC 01213	34	6.5	SmCo 1:5
RDSC 03594	3	4	SmCo 2:17
RDSC 02968	4	5	SmCo 2:17
RDSC 02128	6.35	12.7	SmCo 2:17

Discs with other thicknesses may be supplied cut from stock rod with diameters of: 7, 9, 10, 12.5, 15, 20 & 25 mm, all in SmCo 2:17 grade.

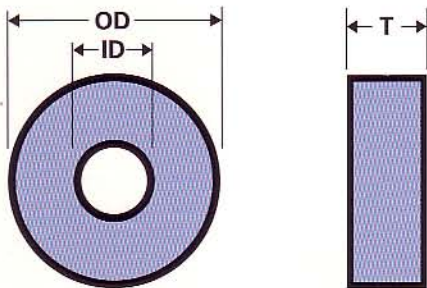
Bars & Blocks



PART NUMBER	SIZE(mm)			Grade
	L	W	T	
BLSC 02625	2	2	1	SmCo 2:17
BLSC 02157	3	2	1	SmCo 2:17
BLSC 00552	7.5	4.75	3	SmCo 1:5
BLSC 00551	10	10	2	SmCo 1:5
BLSC 00553	10	10	3	SmCo 1:5
BLSC 01650	19	10	3	SmCo 2:17
BLSC 00559	30	10	6	SmCo 2:17
BLSC 01929	37	12.7	4.7	SmCo 2:17

Other Block sizes may be supplied in SmCo 2:17 grade only

Rings



PART NUMBER	SIZE(mm)			Grade	Magnetisation
	OD	ID	T		
RGSC 03269	6	2	1.5	SmCo 1:5	diametric
RGSC 01692	10	3	5	SmCo 2:17	
RGSC 01396	20	10	5	SmCo 1:5	
RGSC 03108	20	12.25	3	SmCo 1:5	
RGSC 02096	30	8	7	SmCo 2:17	

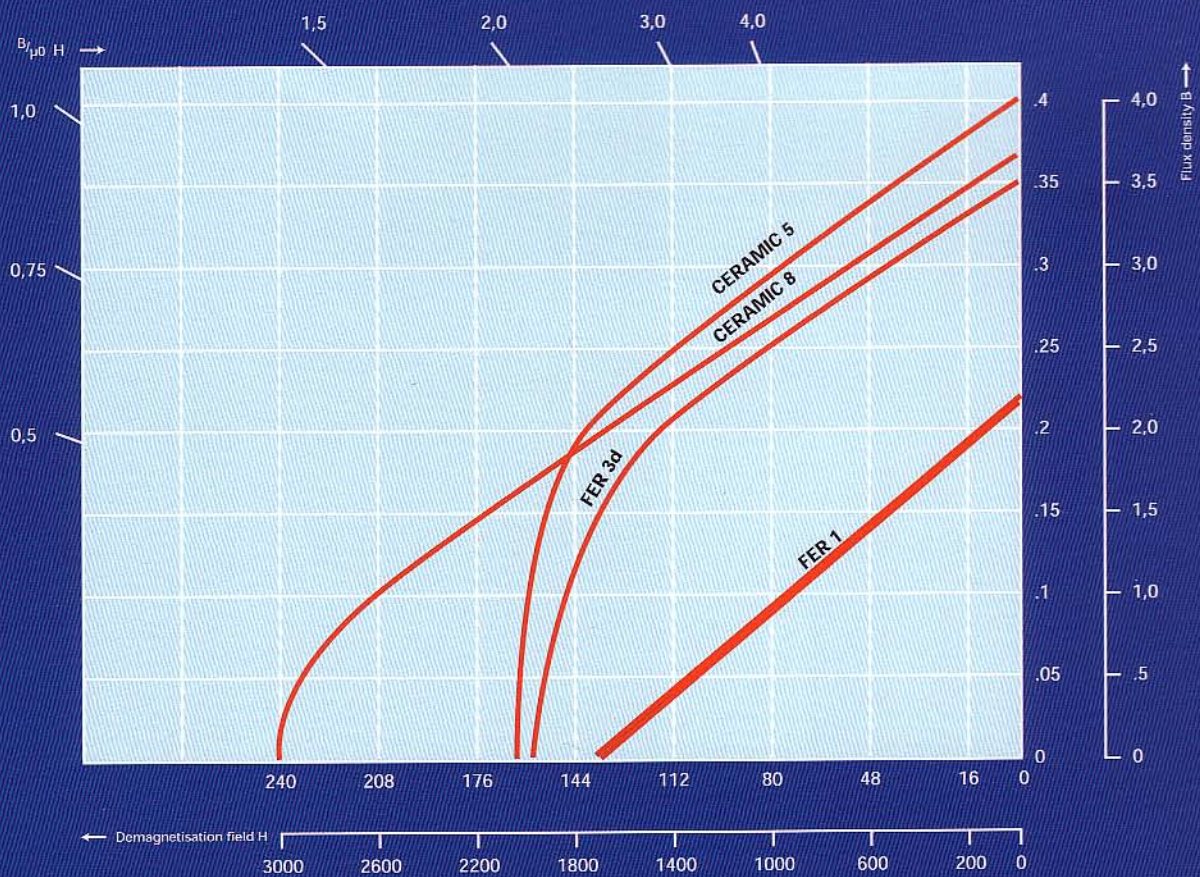
Sintered Ferrite

A cost effective solution to many applications where high resistance to demagnetisation is required. They may be supplied in either a magnetised or unmagnetised condition and other sizes can be cut to order. The sizes shown are some of the most popular, and are suitable for filters, transducers, separators and holding devices. Rings can be supplied magnetised axially or with between 2 and 10 poles on the flat faces in certain sizes for improved holding or for use in pairs as magnetic drives.

Low priced isotropic ferrite discs are widely used for toys, novelties, markers and holding with two or more poles applied to one face. Rings can be used for reed switch operation and when magnetised with multipoles on either the OD or on one flat face, to operate Hall Effect and Reed switches.

Typical Magnet and Physical Specifications

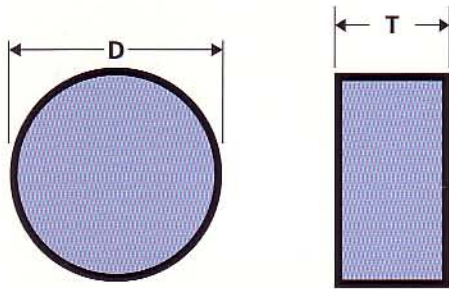
MDL Grade	DIN	Br		BHc		JHc		BHmax		Magnetising Force (minimum)		Max. working temp °C	Density g/cc	Rev. Temp. Coeff. of Br %/°C 20-100°C
		mT	Gauss	kA/m	Oersted	kA/m	Oersted	Kj/m ³	MGO	kA/m	Oersted			
FER 1	8/22	220	2200	136	1700	220	2750	8	1.0	500	7500	250	4.8	-0.19
CER 5	24/18	400	4000	180	2000	185	2000	28	3.5	800	10000	250	5.0	-0.19
FER 3d	24/16	350	3500	155	1950	160	2010	24	3.0	800	10000	250	5.0	-0.19
CER 8	26/26	370	3700	240	3000	280	3250	26	3.3	800	10000	250	4.9	-0.19
PLEX 6	4/24p	165	1650	110	1375	240	3000	4.5	0.6	800	10000	75	3.7	-0.19
FLEX 11	9/22p	225	2250	158	2000	222	2800	9.5	1.2	800	10000	75	3.7	-0.19



Typical demagnetisation curves of Ferrite at room temperature

Anisotropic Sintered Ferrite

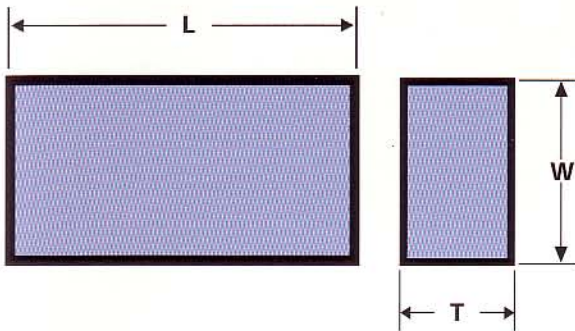
Discs



PART NUMBER	SIZE(mm)		Grade
	D	T	
DCSF 02675	8	5	Feroba 3D
DCSF 00326	10	7	Feroba 3D
DCSF 00327	12	6	Ceramic 8
DCSF 03281	15	5	Ceramic 8
DCSF 03130	19	1.9	Ceramic 8
DCSF 00328	20	6	Ceramic 8
DCSF 03669	22	25.4	Ceramic 8
DCSF 02859	25	3	Ceramic 8
DCSF 00330	25	5	Ceramic 8
DCSF 03044	28	3.5	Ceramic 8
DCSF 00332	30	8	Ceramic 8
DCSF 02933	33	7.6	Ceramic 8
DCSF 04094	38	5.6	Ceramic 8

Tolerances: Diameter $\pm 0.3\text{mm}$ or 3%, whichever is greater (moulded).
Thickness: $\pm 0.15\text{mm}$ (ground)

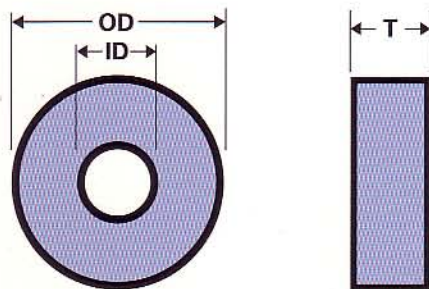
Bars & Blocks



PART NUMBER	SIZE(mm)			Grade	Comments
	L	W	T		
BLSF 00365	5	5	4	Ceramic 8	Cut
BLSF 01695	5.5	5.5	12	Ceramic 8	Cut
BLSF 00925	25	7.7	6	Ceramic 8	Cut
BLSF 00336	25	19	6.1	Feroba 3d	Moulded
BLSF 01968	40	25	10	Ceramic 8	Moulded
BLSF 04225	40	25	20	Ceramic 8	Moulded
BLSF 00348	50	19	4.9	Feroba 3d	Moulded
BLSF 00338	50	19	6.1	Feroba 3d	Moulded
BLSF 02793	50	25	10	Ceramic 8	Cut
BLSF 00354	50	25	12.7	Ceramic 8	Cut
BLSF 01433	75	50	10	Ceramic 8	Moulded
BLSF 03654	75	50	20	Ceramic 8	Moulded
BLSF 00368	100	50	25.4	Ceramic 8	Moulded
BLSF 00347	100	75	25.4	Ceramic 8	Moulded
BLSF 03251	140	22	15	Ceramic 5	Moulded
BLSF 00346	152.5	101.5	12.7	Ceramic 8	Moulded
BLSF 02601	152.5	101.5	20	Ceramic 8	Moulded
BLSF 00340	152.5	101.5	25.4	Ceramic 8	Moulded

Tolerances: CUT $\pm 0.2\text{mm}$, MOULDED: $\pm 3\%$, 'T' Dimension $\pm 0.15\text{mm}$

Rings



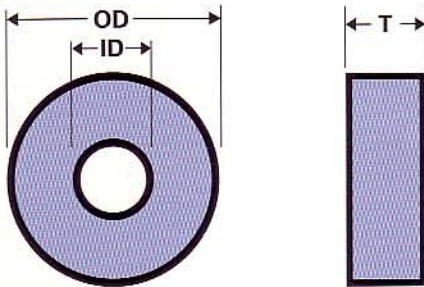
PART NUMBER	SIZE(mm)			GRADE
	OD	ID	T	
RGSF 03100	9.5	4	7	Feroba 3D
RGSF 03717	10	2	8	Feroba 3D
RGSF 00789	15.9	4.6	6	Feroba 3D
RGSF 02156	20	4.5	6.5	Feroba 3D
with both faces countersunk, South pole marked				
RGSF 03609	20	4.5	10	Feroba 3D
with 1 face countersunk, South pole marked				
RGSF 00805	20	5	8	Feroba 3D
RGSF 01201	31	5.3	15	Feroba 3D
with one face countersunk				

Tolerances: OD and ID = $\pm 3\%$, T = 0.15 mm

Anisotropic Sintered Ferrite Loudspeaker Rings

Magnet Developments Ltd are able to supply a vast range of Ceramic 5 Ferrite rings from stock for Loudspeaker construction. The list below is indicative of what is available, but is by no means exhaustive. Please enquire for any other sizes not mentioned or for Neodymium-Iron-Boron Loudspeaker magnets.

Loudspeaker Rings

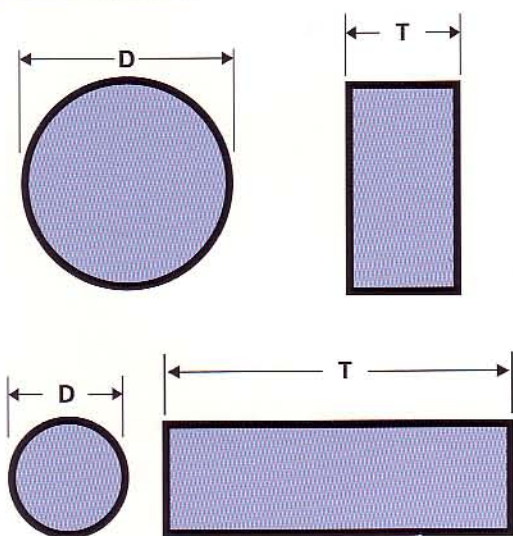


PART NUMBER	OD	SIZE mm		GRADE	Other thicknesses available
		ID	T		
RGSF 01275	30	16	5	Ceramic 5	
RGSF 00906	36	18	8	Ceramic 5	9 mm
RGSF 00441	45	22	9	Ceramic 5	
RGSF 03923	53	24	9	Ceramic 5	
RGSF 00430	60	24	8	Ceramic 5	
RGSF 00431	72	32	10	Ceramic 5	
RGSF 00432	72	32	15	Ceramic 5	18 mm
RGSF 02257	86	32	14	Ceramic 5	
RGSF 03642	90	36	17	Ceramic 5	12 mm
RGSF 03605	102	51	12	Ceramic 5	10, 15 & 18 mm
RGSF 03651	134	56	12	Ceramic 5	14, 19, 20 & 24 mm
RGSF 03461	155	56	13	Ceramic 5	20, 25.4 mm
RGSF 03736	169	86	20	Ceramic 5	
RGSF 03998	190	88	21	Ceramic 5	25.4 mm
RGSF 02736	200	86	21	Ceramic 5	
RGSF 03737	220	110	25.4	Ceramic 5	19 mm
RGSF 02980	225	115	25.4	Ceramic 5	

Tolerances: OD and ID = $\pm 3\%$, T = 0.15 mm

Isotropic Sintered Ferrite

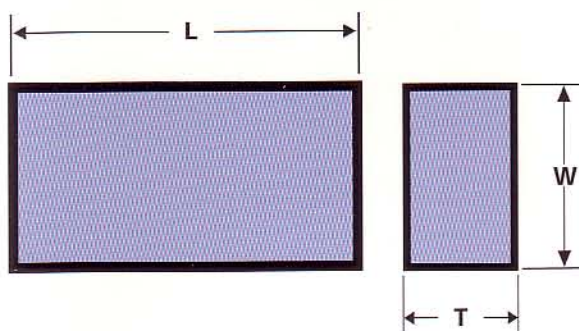
Discs & Rods



PART NUMBER	SIZE(mm)		Pole Distribution
	D	T	
RDSF 01786	2.9	7.5	A
RDSF 01787	4	20	Diametric
RDSF 01854	6	12	A
DCSF 00311	7	3	M
DCSF 00313	10	3	M
DCSF 00315	13	4	A
DCSF 00317	14	5	M
DCSF 00318	14	5	A
DCSF 03538	19	4	M
DCSF 00319	20	3	M
DCSF 00320	20	5	A
DCSF 00321	20	5	M
DCSF 00322	25	3	A
DCSF 00323	25	3	M

Tolerances: Diameters $\pm 0.3\text{mm}$ Thickness $\pm 0.4\text{mm}$
 M = Magnetised with several poles on one face
 A = Axial magnetisation through 'T' dimension

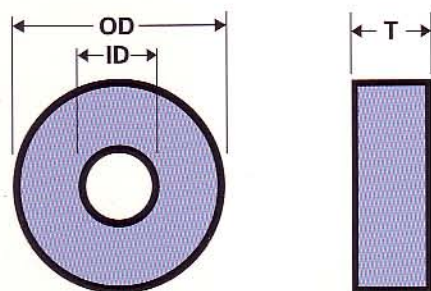
Bars & Blocks



PART NUMBER	SIZE(mm)		
	L	W	T
BLSF 01803	8	8	4
BLSF 01683	12	12	6.4
BLSF 01807	12.7	9.5	3.96
BLSF 01684	22.5	17	3.2*
BLSF 01685	30	10	4.8
BLSF 01812	62	8	6.5

* Has a 4mm central hole through 'T' dimension
 General Tolerances: $\pm 0.4\text{mm}$

Rings & Cylinders



PART NUMBER	SIZE(mm)			Pole Distribution
	OD	ID	T	
RGSF 01516	11.5	8.2	6.8	Axial
RGSF 01758	19.8 (G)	8.0	5.0	12 poles on OD
RGSF 02016	23.8 (G)	7.0*	6.0	8 poles on OD
RGSF 00442	25.4 (G)	9.5 (G)	4.7	6 poles on OD
RGSF 01341	28.8 (G)	12.0	3.1	
RGSF 00434	31.4	7.5	14.0	Axial

* = Shaped Bore
 Tolerances: As sintered $\pm 0.4\text{mm}$
 Ground (G) $\pm 0.1\text{mm}$

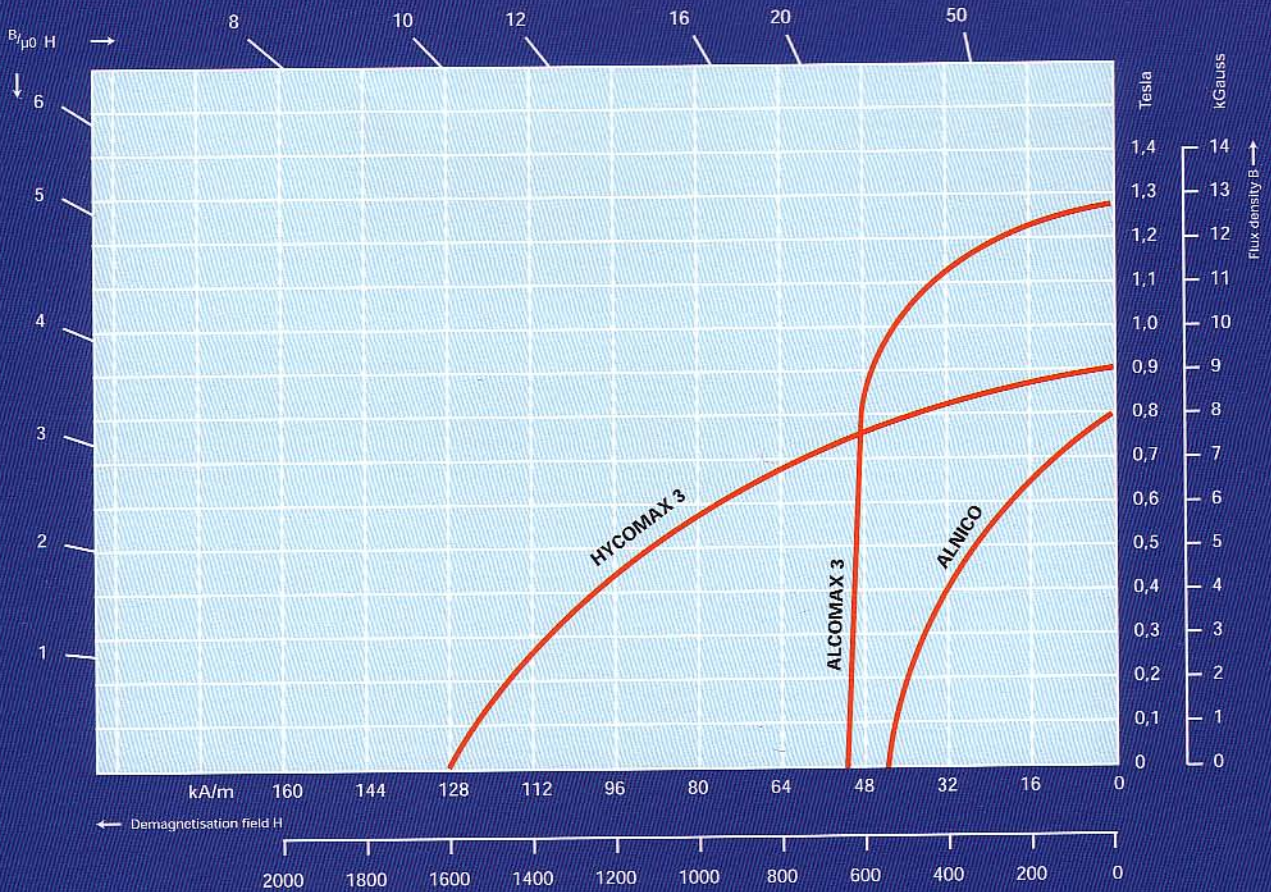
Aluminium - Nickel - Cobalt - Alloys

Cast Alnico magnets have a variety of applications including transducers, filters, tachometers and reed and Hall Effect switch operation. Maximum working temperature is 550°C

A preferred magnetic axis is determined during manufacture, which is as shown. Magnets should be magnetised after assembly to achieve maximum performance.

Typical Magnet and Physical Specifications

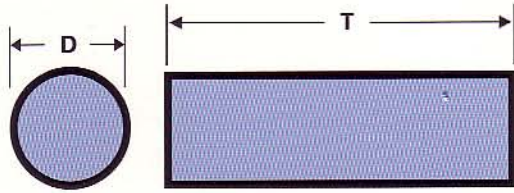
MDL Grade	DIN	Br		bHc		jHc		BHmax		Magnetising Force (minimum)		Max working temp °C	Density g/cc	Rev. Temp Coeff. of Br %°C 20-100°C
		mT	Gauss	kA/m	Oersted	kA/m	Oersted	k/m²	MGO	kA/m	Oersted			
ALNICO	14/4	800	8000	40	500	42	530	14.0	1.7	240	3000	550	7.3	-0.02
ALCOMAX III	45/5	1260	12600	52	650	53	663	43	5.4	240	3000	550	7.3	-0.02
HYCOMAX III	45/13	800	8000	125	1600	130	1625	45	5.6	500	6250	550	7.3	-0.02



Typical demagnetisation curves of Alnico types at room temperature

Aluminium - Nickel - Cobalt Alloys

Rods



PART NUMBER	SIZE(mm)		Grade
	D	T	
RDAL 00394	3.0	10.0	Alcomax III
RDAL 00395	3.0	15.0	Alcomax III
RDAL 00016	4.0	15.0	Alcomax III
RDAL 00029	5.0	15.0	Alcomax III
RDAL 00987	5.0	25.4	Alcomax III
RDAL 00053	6.0	18.0	Alcomax III
RDAL 00151	6.0	25.0	Alcomax III
RDAL 01278	6.5	19.0	Alcomax III
RDAL 00199	8.0	25.0	Alcomax III
RDAL 00224	12.5	152.0	Alcomax III

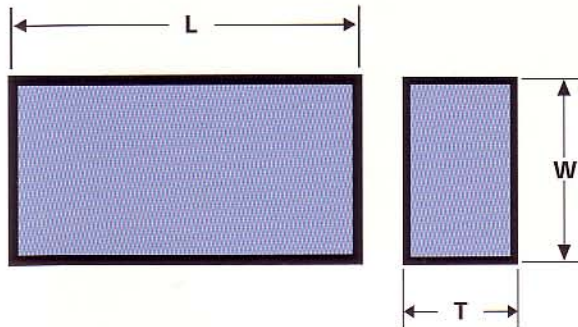
Tolerances on diameters 3-8 mm +0 -0.2

Tolerances on diameters 10-12.5mm +0 -0.25

Tolerances on all lengths =0.2

These are a selection only. Almost any length can be cut from stock Bar.

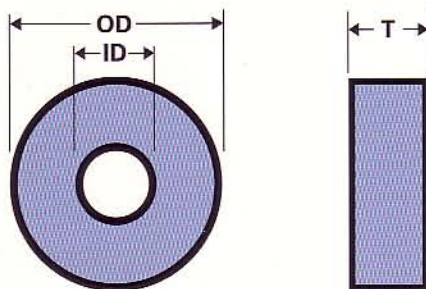
Bars & Blocks



PART NUMBER	SIZE(mm)		L(a)	Grade	Comments
	W	T			
BLAL 02058	8	3	11	Alcomax III	
BLAL 02079	19	5	12.5	Alcomax III	
BLAL 03057	3.17	1.57	12.7	Alcomax III	RSH01
BLAL 00256	4.3	4.3	13	Alcomax III	
BLAL 03058	3	3	19.05	Alcomax III	RSH33
BLAL 02505	6	3	20	Alcomax III	
BLAL 00850	4.3	4.3	22.5	Alcomax III	
BLAL 03190	6.35	6.35	25.4	Alcomax III	RSH34
BLAL 03133	4.75	4.75	27.94	Alcomax III	RSH32
BLAL 00233	10.3	3.2	39.6	Alcomax III	*

* = 2 x 4.8 holes on 29mm centres

Rings & Cylinders



PART NUMBER	SIZE		T(G)	Axis	Comments
	OD	ID			
RGAL 00265	15.8 (G)	5.0	9.0	Diametric	
RGAL 01235	18.9 (G)	7.0	8.0	Diametric	
RGAL 03066	21.33	7.05	0.66	Axial	Hycomax III
RGAL 00266	22.0	8.0	22.0	Axial	
RGAL 00270	30.4	19.0	12.7	Axial	
RGAL 01117	32.5	8.7	25.4	Axial	
RGAL 00273	37.3	9.5	31.75	Axial	
RGAL 00263	40/32.0	6.0	25.8	Axial	Tapered OD
RGAL 00849	44.0	22.0	11.0	Axial	
RGAL 03883	53.3	17.8	12.7	Axial	Hycomax III
RGAL 02627	76.5	53	19.0	Axial	with two slots for fixing screws

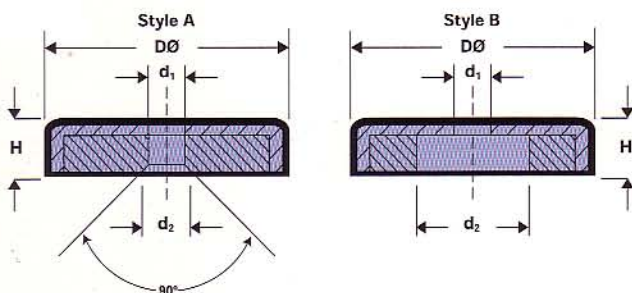
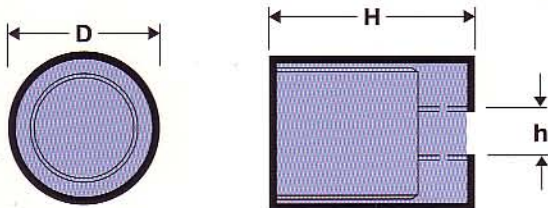
Tolerances: OD ±0.5mm, ID ±0.4mm

(G) denotes this dimension ground to ±0.1mm

Pot Type Holding Magnets

These pot type holding and lifting magnets consist of a cylindrical magnet assembled with a concentric non magnetic ring into a mild steel, brass or stainless steel pot, the open end providing a powerful gripping face. Where mild steel pots are used, there are no external stray fields and so they can be fitted into a ferrous housing without loss of performance. Typical applications are fixture positioning, machine work holders, conveyor systems, tool bases, inspection mirrors, portable protective shields, etc.

Best results are obtained when there is direct contact between the holding face and the ferrous article being held. Wherever Pull performance figures are given, these relate to lifting a flat ferrous piece at least 3mm thick through zero air gap. The smallest gap, even paint, will reduce the holding force significantly. On a vertical surface the holding force is reduced by approximately 70%. For further guidance on the most efficient use of pot magnets please consult our technical department.

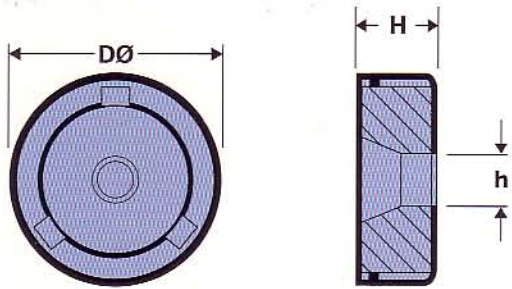


PART NUMBER	SIZE mm			Pull kgs
	D	H	h	
DPAL 00284	17	15.9	M6	2.7
DPAL 00400	20	19.7	M6	4.5
DPAL 00285	27	25	M6	7
DPAL 00286	35	30	M6	14.8

Magnet material: Alcomax III
 Finish red paint and supplied kept
 Maximum operating temperature + 200°C

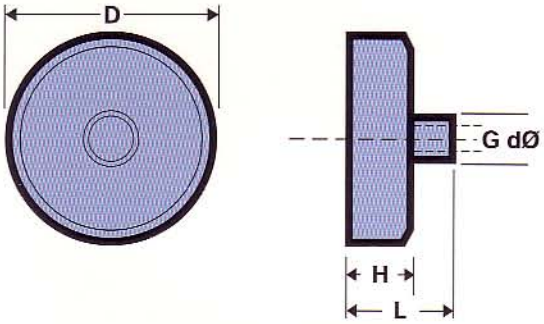
PART NUMBER	Style	SIZE mm			H	Pull Kgs
		D	d1	d2		
SPSF 02083	A	20	4.2	8.6	6	2.5
SPSF 02084	A	25	5.5	10.4	7	3.5
SPSF 02085	A	32	5.5	10.4	7	7.0
SPSF 02086	A	40	5.5	10.4	8	9.0
SPSF 02087	B	50	8.5	22.0	10.5	20.0
SPSF 00056	A	90	10	18.0	12	50.0

Magnet material: Anisotropic Ferrite
 Maximum operating temperature + 120°C



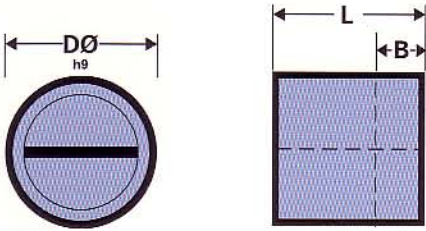
PART NUMBER	Magnet Material	Size (mm)		h	kg	Pull Finish
		D	H			
SPAL 00080	Alcomax III	19	7.6	3.5	3	Red Paint
SPAL 00081	Alcomax III	29	8.7	4.8	5	Red Paint
SPAL 00082	Alcomax III	26	12	4.5	6	Nickel Plate
SPAL 00084	Hycamax II	38	11	6.5	20	Nickel Plate
SPAL 00085	Hycamax II	49	12	6.5	27	Nickel Plate
SPAL 00086	Hycamax II	60	15	8.4	41	Nickel Plate

Maximum operating temperature + 550°C



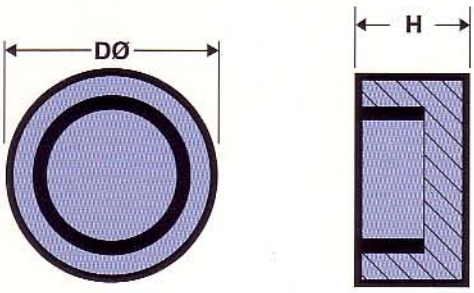
PART NUMBER	Size (mm)				Pull Kg	Weight gms
	DØ	H	L	G		
SPSF 00058	13	4.5	11.5	M3	6	0.9
SPSF 00059	16	4.5	11.5	M3	6	1.8
SPSF 00060	20	6	13	M3	6	2.8
SPSF 00061	25	7	15	M4	8	4
SPSF 00062	32	7	15	M4	8	8
SPSF 00063	36	8	15	M4	8	10
SPSF 00064	40	8	18	M5	10	13
SPSF 00065	47	9	19	M6	12	16
SPSF 00066	50	10	22	M6	12	24
SPSF 00067	57	11	21	M6	12	28
SPSF 00068	63	14	30	M8	15	32
SPSF 00069	80	18	34	M10	16	60

Magnet material: Anisotropic Ferrite
 Also Available without fixing lugs.
 Maximum operating temperature +120°C



PART NUMBER	Size (mm)			Pull Kg	Weight gm	Min Wall*
	DØ	L	B			
DPSC 00103	6	20	10	0.6	4	1.5
DPSC 00104	8	20	10	1	8	1.5
DPSC 00105	10	20	8	4	12	2
DPSC 00106	13	20	6	6	20	2.5
DPSC 00107	16	20	2	12.5	32	3
DPSC 00108	20	25	5	25	60	4
DPSC 00109	25	35	7	40	140	5
DPSC 00110	32	40	5	60	265	6

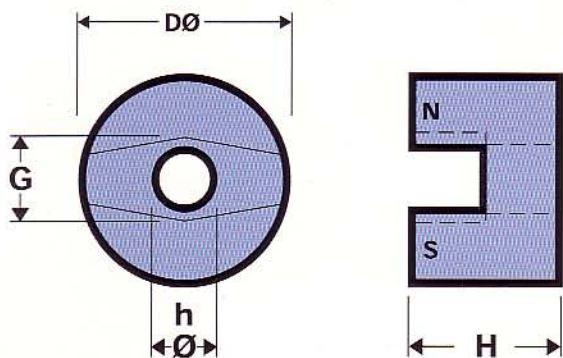
Magnetic Material: Samarium Cobalt - outer case: Brass
 Maximum operating temperature + 200°C
 B = maximum drilling depth into base
 L tolerance = ±0.2
 * if mounted in a ferrous body, an additional non magnetic bush should be used with a minimum wall thickness as shown



PART NUMBER	SIZE(mm)		Pull kg
	D	T	
SPSC00111	6	4	0.5
SPSC00112	10	5	2
SPSC00113	13	5	4
SPSC00114	17.5	5	6
SPSC00115	25	9	15
SPSC01350*	43	16	50

Magnet Material: Samarium Cobalt
 Maximum operating temperature +150°C
 Tolerances D = ±0.1 H = ±0.2
 *Has M4 tapped fixing hole

Button Magnets

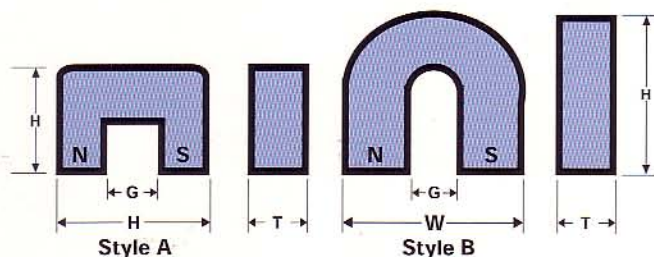


PART NUMBER	SIZE(mm) DØ	H	G	hØ	Pull Kgs
BNAL 00275	9.5	8	5.5	3.5	0.3
BNAL 00276	12.7	9.5	7.1	4	0.6
BNAL 00277	15.8	11	7.6	4	1.1
BNAL 00278	19.1	12.7	8.7	4.5	1.8
BNAL 00280	25	15.8	9.5	5.5	3

These Alnico magnets are magnetised as 'horseshoes' to produce both poles on one plane. Central fixing holes are provided and the gap between the poles accepts a standard cheese head fixing screw.

Suitable uses are for light duty holding and reed switch operation. Maximum operating temperature is 550°C.

Horseshoe Magnets



PART NUMBER	Style	Material	SIZE (mm)				Hole SIZE (No)	Pull Kg	Col.
			W	H	G	T			
HSAL 00293	A	Alnico	22	11	6	8	-	0.4	Red
HSAL 03918	A	Alcomax 3	25	16	13	8	-	1.5	-
HSAL 00296	B	Alnico	28	25	7	8	-	1.2	Red
HSAL 00297	A	Alcomax 2	30	19	14	19	5.5(1)	5.9	Red
HSAL 00298	A	Alcomax 2	38	25	19	25	5.5(1)	10	Red
HSAL 00299	B	Alcomax 2	56	46	30	24	5.5(1)	14.5	Red
HSAL 00300	B	Alcomax 2	62	51	30	24	7(1)	16.8	Red
HSAL 00301	B	Alcomax 3	86	70	54	45	9.5(1)	34	Red
HSAL 00302	A	Alcomax 3	114	27	79	48	8(2)	22.7	Blue
HSAL 00303	A	Alcomax 3	127	98	70	48	11(2)	60	Blue

These magnets still provide a compact, high power magnetic source, and are used for traction, lifting, sorting, clamping and retrieval.

Supplied with ground pole faces, painted and kept.

Maximum operating temperature, 550°C.

Flexible Magnetic Material



Flexible Ferrite has many applications, and may be supplied with and without adhesive backing. Normally magnetised with multiple poles on one face for maximum holding power, but can be supplied axially magnetised to special order. Available in tape, sheet and steel backed form.

PART NUMBER	Adhesive Backing	Width mm	Thickness mm	Roll length	Lifting force g/linear cm	Grade
TAPE						
TPFF 02338	Yes	12.5	1.5	30m	100	Flex 11
TPFF 00449	Yes	14	1.5	30m	115	Flex 11
TPFF 00446	No	14	1.5	30m	115	Flex 11
TPFF 00450	Yes	20	1.5	30m	170	Flex 11
TPFF 00447	No	20	1.5	30m	170	Flex 11
TPFF 00451	Yes	50	1.5	30m	420	Flex 11
SHEET						
SHFF 00452	Yes	420	1.5	15m	85	Flex 11
SHFF 00448	No	420	1.5	15m	85	Flex 11
SHFF 00991*	No	610	0.8	30m	39	Flex 6
* Gloss white PVC facing on unmagnetised face.						
STRIP						
STFF 00456	No	310	x 9.5	x 3.6	-	Flex 11

Flexible Magnetic Strip is also available in 50 & 75 mm lengths

Steel Backed Sheet

PART NUMBER	Backing	Length	Width	Thickness	g/sq cm	Grade
ASFF 00784	White	500	x 320	x 2.5	125	Flex 11
ASFF 02997	Zinc	500	x 420	x 2.5	125	Flex 11



Certificate No: 9430□

MMG MagDev Limited

Parsonage Road, Stratton St Margaret
SWINDON, Wiltshire, SN3 4RN, UK

Tel: +44 (0)1793 833200

Fax: +44 (0)1793 834359

Email: sales@magdev.co.uk

Web: www.magdev.co.uk