

Circular Lifting Magnet MCA

MCA Series Lifting Magnet is the result of many years of experience, enhanced through advanced computerized calculations to achieve powerful magnetic fields, a robust structural design, and high safety performance. MCA lifting magnet features a deep magnetic field generated by its optimized coil, significantly increasing its lifting capacity relative to its own weight. This allows cranes to handle heavier loads more efficiently.

MAG Magnetics designs its lifting magnets in standard deep-field, semi and extra deep-field configurations to suit a wide range of applications. Standard deep-field magnets are commonly used in scrap processing and recycling facilities. Semi and Extra deep-field models are specifically designed for demanding applications such as charging electric arc furnaces and loading transportation vessels, including ships and railcars. General scrap iron can be effectively handled by either semi deep-field or extra deep-field magnets. However, shredded scrap iron is best managed using an extra deep-field magnet, ensuring optimal lifting performance and efficiency.

AC/DC Rectifier

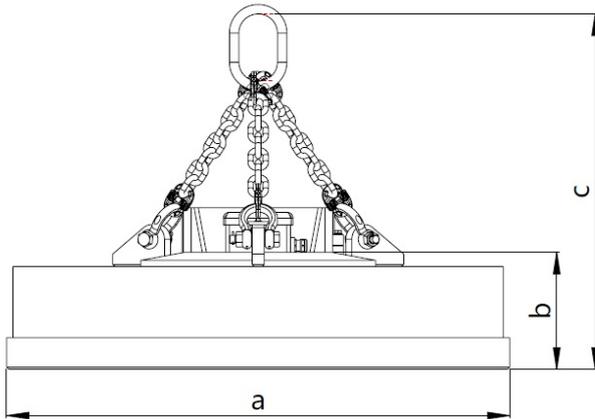
DC power supplies are typically installed at fixed locations, such as base-mounted on overhead cranes, and are sized based on DC output power capacity. MAG standard enclosures are rated IP54; however, the required ingress protection (IP) rating should be selected based on the site environment to ensure the unit remains dry and free from dust. All DC power supplies can provide various control and monitoring functions, such as local/remote power on/off switching, voltage and current metering, a microprocessor-based maintenance diagnostics package, and optional emergency power systems (backup batteries).

MCA Features and Applications

- scrap and pig iron handling is the primary application of mca lifting magnets.
- the exciter coil winding is typically made using an aluminum strip conductor with fiberglass insulation or aluminum foil with mica insulation. for special applications, anodized aluminum strip or copper conductors can also be supplied.
- the magnet coil is encapsulated in a compound resin with excellent thermal conductivity.
- to extend the magnet's service life, the rectifier panel is equipped with a temperature monitor, duty cycle relays, and protection against output short-circuit accidents.
- the accessory equipment includes a cable reel, suspension chains, and a power supply socket.
- mag magnetics supplies specialized lifting magnets for applications such as skull cracker ball handling, hot material handling, direct furnace charging, and waterproof models for underwater operations.
- the magnet has a duty factor of 50% for continuous operation, which can be increased to 60% or 75% for high-rate operations.
- the standard operating voltage is 220vdc
- the lifting capacities shown in the technical table are average values and depend on factors such as material shape, alloy composition, distribution, and piling.
- the cable terminal box features a sturdy metal body and includes terminal boards, cable glands, a cable clamp, and a watertight cover.



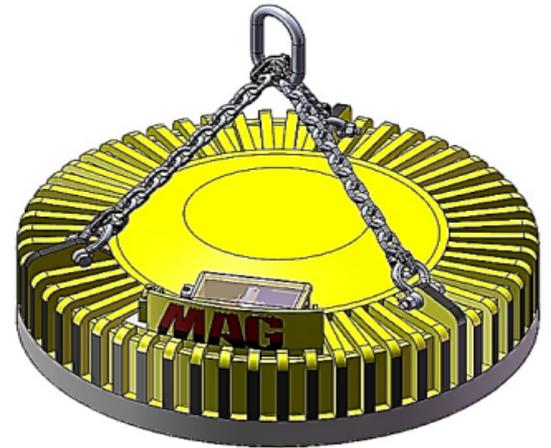
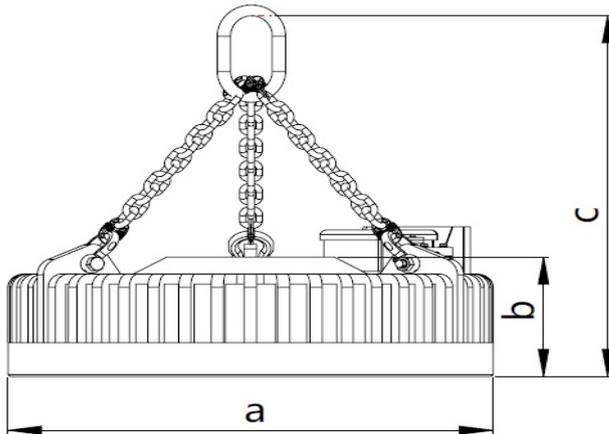
Circular Lifting Magnet MCA



MCA-L Series Lifting Magnet (Light Scraps)

Model	Magnet Cold Wattage	Magnet rated voltage	Dimensions			Chain Suspension Parts W.L.L	Weight Approx.	Duty Factor at 10 min.	Tear-off force Dia./300 Magnet warm	Approx. Max lifting capacity (Kg)						
			Øa	b	c					Slabs Ingot	Pigs	Broken Solid Scraps	Steel Turnings			
	KW	Vdc	mm	mm	mm	Kg	Kg	%	kgf	7.8 t/m3	4.4 t/m3	0.8 - 1.5 t/m3	1.2 t/m3			
MCA 11L	6.5	220	1,144	275	875	6,500	1,081	75	20,509	10,000	456	275	235			
MCA 12L	7.3		1,251	285	885		1,298		21,200	10,600	530	330	280			
MCA 13L	8.5		1,320	290	960		1,491		23,400	11,700	604	387	330			
MCA 14L	9.3		1,396	315	985	11,000	1,819		60	28,039	14,000	760	480	410		
MCA 15L	10.4		1,463	335	1,085		2,120			32,554	16,000	915	577	485		
MCA 16L	11.7		1,568	365	1,315		2,607			35,500	17,800	1,040	655	550		
MCA 17L	13.5		1,664	380	1,330	21,000	3,132			75	42,394	21,000	1,250	790	665	
MCA 18L	15.5		1,768	400	1,350		3,692				47,200	23,000	1,460	925	780	
MCA 19L	16.2		1,864	410	1,410		4,328				53,400	26,000	1,760	1,090	920	
MCA 20L	18.7		1,962	410	1,410	32,000	4,857				60	59,100	29,000	2,065	1,260	1,060
MCA 21L	21		2,074	465	1,465		6,521					65,400	32,500	2,435	1,510	1,280
MCA 22L	25.1		2,183	515	1,515		8,130					70,600	35,000	2,810	1,760	1,500
MCA 23L	28.6	2,283	520	1,520	40,000	8,528	75	80,600				40,000	3,330	2,095	1,780	
MCA 24L	33	2,394	535	1,635		9,090		89,410				44,500	3,850	2,430	2,075	
MCA 25L	36.4	2,479	545	1,845		9,931		95,860				48,000	4,220	2,670	2,270	
MCA 26L	37.8	2,564	545	1,845	40,000	10,589		75	100,400			49,000	4,590	2,910	2,470	
MCA 27L	42	2,660	560	1,860		11,822			110,500			55,000	5,090	3,220	2,730	
MCA 28L	45	2,768	570	1,920		12,941			115,523			58,000	5,590	3,530	2,990	
MCA 32L	54.4	3,173	620	2,020		18,905				151,546		76,000	7,480	5,080	4,280	

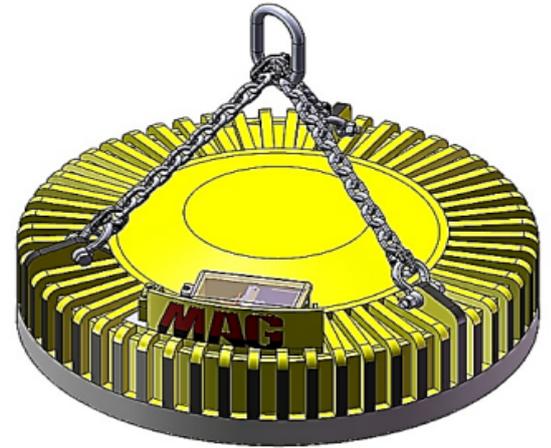
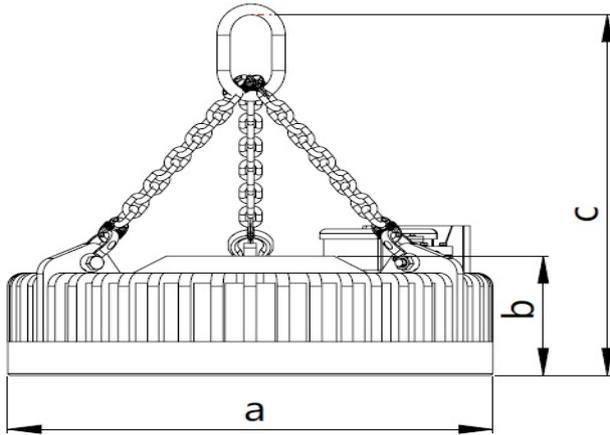
Circular Lifting Magnet MCA



MCA Series Lifting Magnet (Clean Scraps)

Model	Magnet Cold Wattage	Magnet rated voltage	Dimensions			Chain Suspension Parts W.L.L	Weight Approx.	Duty Factor at 10 min.	Tear-off force Dia./300 Magnet warm	Approx. Max lifting capacity (Kg)			
			øa	b	c					Slabs Ingot	Pigs	Broken Solid Scraps	Steel Turnings
	KW	Vdc	mm	mm	mm	Kg	Kg	%	kgf	7.8 t/m3	4.4 t/m3	0.8 - 1.5 t/m3	1.2 t/m3
MCA 7	1.95	110	708	245	619	4,250	408		7,365	3,700	205	82	72
MCA 9	3.1		894	275	716	5,000	745	60	12,100	6,000	337	136	122
MCA 10	4		990	280	721		988		16,200	8,000	455	187	162
MCA 11	5.1		1,123	290	920	12,600	1,343		22,328	11,000	640	255	226
MCA 12	6		1,225	305	935		1,659	26,873	13,000	820	335	288	
MCA 13	6.9		1,324	320	993	17,000	1,973		32,800	16,000	1,005	416	351
MCA 14	7.8		1,403	330	1,003		2,357	37,221	18,500	1,195	488	420	
MCA 15	8.6	220	1,503	350	1,100	21,000	2,811		42,300	21,000	1,387	560	495
MCA 16	10		1,601	350	1,100		3,165	75	49,212	24,500	1,660	680	575
MCA 17	11.3		1,697	365	1,235		3,650		56,802	28,000	1,930	800	660
MCA 18	12.7		1,802	390	1,260		4,434		62,893	31,000	2,265	930	780
MCA 19	14.5		1,900	405	1,275	26,000	5,116		70,900	35,000	2,600	1,060	900
MCA 20	17.3		2,011	430	1,300		6,083	85,349	42,500	3,128	1,290	1,095	
MCA 21	19.3		2,116	460	1,330		7,109		102,119	51,000	3,657	1,524	1,290
MCA 22	21.5		2,216	520	1,390		9,672		114,567	57,000	4,100	1,700	1,450

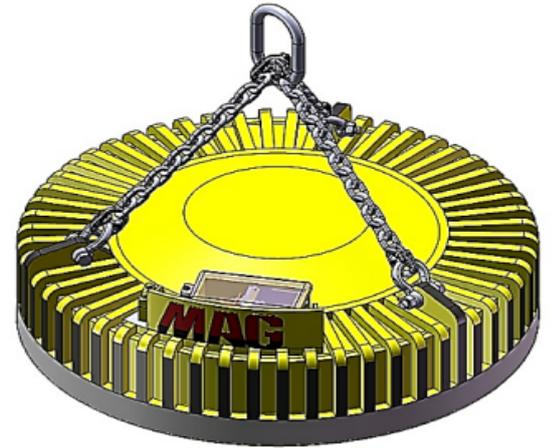
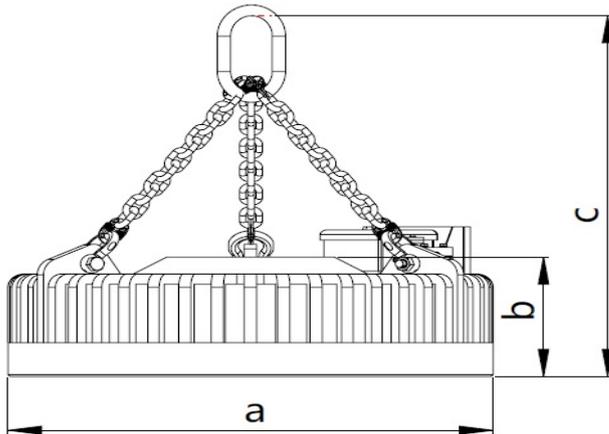
Circular Lifting Magnet MCA



MCAH -L Series Lifting Magnet (Semi Heavy Scraps)

Model	Magnet Cold Wattage	Magnet rated voltage	Dimensions			Chain Suspension Parts W.L.L	Weight Approx.	Duty Factor at 10 min.	Tear-off force Dia./300 Magnet warm	Approx. Max lifting capacity (Kg)				
			Øa	b	c					Slabs Ingot	Pigs	Broken Solid Scraps	Steel Turnings	
	KW	Vdc	mm	mm	mm	Kg	Kg	%	kgf	7.8 t/m3	4.4 t/m3	0.8 - 1.5 t/m3	1.2 t/m3	
MCAH 11L	6.6	220	1,131	355	1,065	17,000	1,720	60	30,014	15,000	820	410	307	
MCAH 12L	7.6		1,241	365	1,075		2,100		35,630	17,500	1,015	495	395	
MCAH 13L	8.8		1,344	380	1,090		2,494		42,479	21,000	1,210	580	483	
MCAH 14L	10.4		1,445	395	1,305		21,000		3,034	52,247	26,000	1,505	728	600
MCAH 15L	12		1,539	415	1,385		3,618		61,000	30,000	1,750	850	700	
MCAH 16L	14.3		1,641	450	1,420		4,574		69,439	34,000	2,065	1,010	830	
MCAH 17L	16.7		1,733	490	1,485		5,573		80,247	40,000	2,385	1,167	965	
MCAH 18L	18.9		1,829	520	1,515	26,000	6,422		89,326	44,000	2,660	1,355	1,105	
MCAH 19L	21.4		1,930	545	1,540	7,498	100,500		50,000	2,965	1,540	1,220		
MCAH 20L	22.2		2,052	570	1,620	8,576	110,400		55,000	3,270	1,730	1,340		
MCAH 21L	24.1		2,148	590	1,640	9,790	125,284		62,000	3,630	1,960	1,515		
MCAH 22L	26.2		2,246	610	1,670	10,997	137,300		68,000	3,990	2,190	1,695		
MCAH 23L	29		2,345	645	1,705	40,000	12,513		147,500	73,000	4,290	2,350	1,820	
MCAH 24L	32.4		2,404	700	1,760	14,412	154,735		77,000	4,520	2,475	1,920		

Circular Lifting Magnet MCA



MCAH Series Lifting Magnet (Heavy Scraps)

Model	Magnet Cold Wattage	Magnet rated voltage	Dimensions			Chain Suspension Parts W.L.L	Weight Approx.	Duty Factor at 10 min.	Tear-off force Dia./300 Magnet warm	Approx. Max lifting capacity (Kg)			
			øa	b	c					Slabs Ingot	Pigs	Broken Solid Scraps	Steel Turnings
	KW	Vdc	mm	mm	mm	Kg	Kg	%	kgf	7.8 t/m3	4.4 t/m3	0.8 - 1.5 t/m3	1.2 t/m3
MCAH 15	19.1		1,543	612	1,562		5,350		79,373	39,000	2,230	1,140	1,090
MCAH 16	21		1,668	640	1,590		6,507		93,948	47,000	2,780	1,410	1,260
MCAH 17	23.3		1,770	670	1,620	26,000	7,749		104,500	52,000	3,190	1,580	1,430
MCAH 18	24.5	220	1,851	730	1,710		9,321	60	115,634	57,500	3,588	1,745	1,600
MCAH 19	27.1		1,952	750	1,730		10,577		129,726	64,500	3,970	2,060	1,810
MCAH 20	30		2,052	830	1,880		12,373		146,700	73,000	4,350	2,380	2,025
MCAH 21	33.5		2,154	890	2,090	40,000	15,076		162,393	81,000	4,770	2,640	2,160
MCAH 22	36.3	230	2,267	945	2,145		17,712		177,533	88,000	5,185	2,890	2,300