

Compact magnets

Load handling devices for unit loads

Battery magnets, permanent magnets, circular magnets, ESB rectangular magnet



Demag DBM 34/68 battery magnets

Easy to operate, robust and safe

Demag battery magnets are complete units consisting of an electromagnet, battery and control panel with an integrated charger.

Battery magnets are used for efficient handling and safe transportation of magnetizable loads independently of a mains power supply.

In stationary form on wall-mounted and pillar slewing cranes, or in mobile form on overhead travelling cranes, mobile cranes, forklift trucks, workshop cranes, in mechanical workshops, in sheet and profile section steel stores, and generally in workshops for such applications as marking-out, flame-cutting, forging, repair work and welding.

Outstanding design features are the prerequisites for the wide-ranging and flexible application of Demag battery magnets:

- High load capacity with a safety factor of 2.
- Compact design, with IP 53 enclosure, also suitable for outdoor use. Power source, charging set and controls are all combined in one unit.
- Safe pick-up of the load is guaranteed at all times by a lockout device which prevents the magnet from being energized if the battery voltage is too low.
- Sheets and plates can be separated by flicking the rotary switch.
- Any residual magnetism can be largely eliminated by automatic demagnetization.

Front panel with controls arranged on the front of the electronic monitoring and control unit.



- Mounting handle
- Status indicators
- Ready indicator
- ON indicator
- Flick function
- Operating switch
- "Demagnetize" switch
- Remote control socket
- Charging cable socket
- Signal transmitter
- Mains fuse

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- Automatic charging control prevents the 12 V battery from being overcharged.
- The charge level is indicated at all times by LEDs which show the battery voltage. Two-fold monitoring is provided by an audible alarm signal and visible alarm display if the battery voltage drops below the permissible minimum.
- Automatic self-test of the warning device before the charging operation starts.

A handle with an integrated on/off switch can be screwed into the magnet housing as an accessory for better guidance of the load held by the magnet. The unit includes a charging cable.



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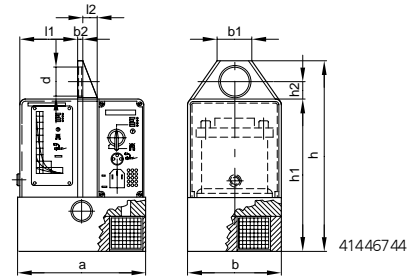
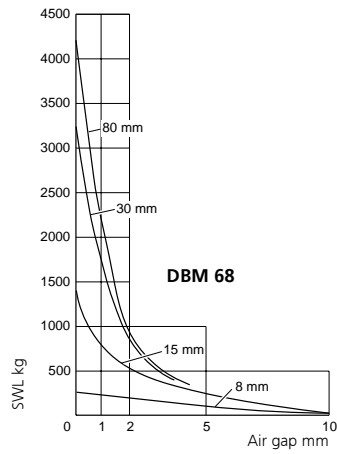
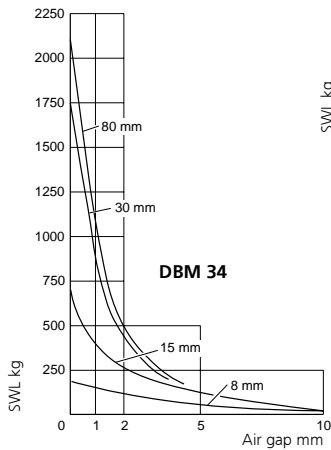
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Weighty problems become light work On the site or in the factory

The diagrams show that the SWL which can be achieved depends on the air gap between the material surface and the magnet, and on the material thickness. For safety reasons, the safe working loads given are based on a safety factor of 2 (mild steel).



Size	Dimensions in mm									
	B	a	h	d	h ₁	b ₁	b ₂	l ₁	l ₂	h ₂
34	250	340	460	80	350	60	20	157	55	50
68	250	680	525	120	355	120	25	328	145	70

Type	DBM 34	DBM 68
Part no.	727 204 44	727 205 44
Max. SWL with a safety factor of 2	approx. 2000 kg	approx. 4000 kg
Power consumption	52.2 W	86.8 W
Battery voltage	12 V	12 V
Battery capacity	44 Ah	120 Ah
Discharge period at 50 % CDF/10 min.	8 hours	8 hrs.
Charging period	max. 10 hours	max. 10 hours
Charging voltage	220 V AC/50 Hz	
Length	340 mm	680 mm
Width	250 mm	250 mm
Height incl. suspension eye	460 mm	525 mm
Suspension eye diameter	80 mm	120 mm
Dead weight	80 kg	169 kg

Accessories

Handle with integrated switch
Part no. 723 707 44 (DBM 34 and DBM 68)



Demag permanent magnet

Simple handling, reliable, low maintenance

Independent of the mains power supply, this versatile load handling magnet can be used in a wide variety of workplaces, including manufacturing and assembly shops, and outdoor applications.

Requiring no external power supply or charging, this robust magnet can be used continuously, the magnetic force is constantly available.

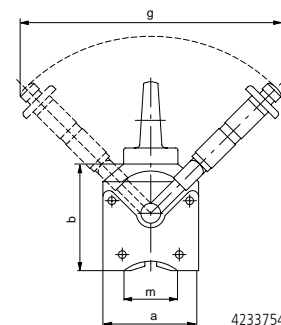
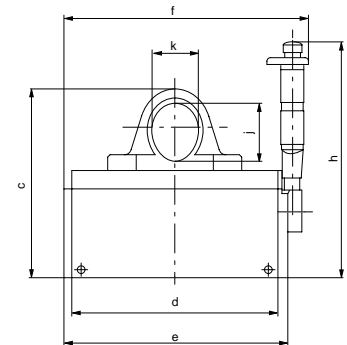
The Demag DPM permanent magnet combines ease of operation with high performance:

- Low operating costs
- High degree of safety
- No residual magnetism
- Versatile and independent of the mains power supply
- Lever operation with integrated safety feature to prevent accidental demagnetization



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Size	Dimensions in mm											Peso kg
	a	b	c	d	e	f	g	h	i	k	m	
DPMN 1	75	83	145	135	155	177	270	225	43	35	36	6
DPMN 2	95	105	167	175	195	215	285	248	43	35	50	12
DPMN 3	105	118	205	230	250	272	290	260	60	52	60	21
DPMN 4	150	168	256	290	310	350	660	420	60	52	72	55
DPMN 5	178	201	324	350	370	410	660	420	87	64	87	95
DPMN 6	216	236	360	380	400	440	660	420	87	64	110	145



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
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The Demag DPMN permanent magnet operates independently of power supply. Due to the specific arrangement of a group of permanent magnets the magnet field lines act on the magnet pole and the load or are deflected in the magnet housing so that the poles are not magnetised. In position "I", the magnetic field lines are guided via the poles through the load. The magnet is active. In position "O", the magnet pole surfaces are neutral and the magnet is therefore switched off.

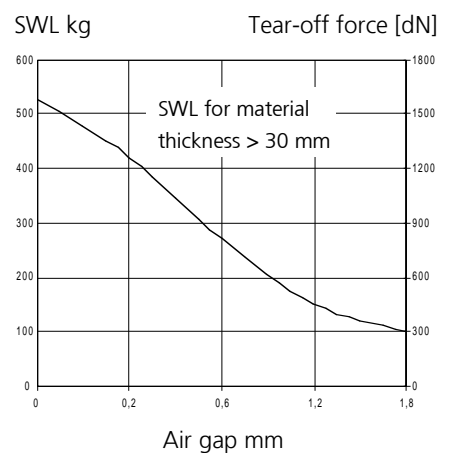
The load lifting magnet consists of individual standardized components. The inside of the magnet comprises the actual magnet system consisting of a reversing magnet system, the magnet assembly and the magnet poles.

Type	SWL [kg]		Ø mm min. max.
			
DPMN 1	150	65	40/100
DPMN 2	250	100	40/160
DPMN 3	500	210	40/220
DPMN 4	1000	540	80/300
DPMN 5	1500	810	80/350
DPMN 6	2000	1080	80/400

The load capacity data refer to the air gaps and material thicknesses as shown in the diagram for plain steel (St 37 mild steel), flat load surfaces.



SWL diagram for DPMN 3



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The right size for every application. The 6 sizes with load capacities from 150 kg to 2000 kg can be used for both round and flat material.



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R15 – 30 circular magnets

Very powerful units for their size

As single units, circular magnets feature high load capacities with compact dimensions. The magnet casing consists of steel of high permeability. The coil in the magnet casing is wound with copper varnished wire and fully encapsulated. Load capacities of up to 1400 kg are possible with a safety factor of 2. These magnets are suitable for holding and transporting small sheet metal parts and iron or tool parts as well as for handling pig and cast iron and other scrap, small parts, nuts and bolts.

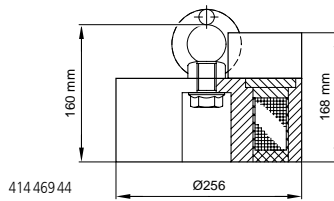
As single magnets they feature an integrated rectifier, switch and suspension eye. They can be connected to the electrical power supply with an accessory set which includes a cable drum. The switch can also be fitted in the hoist unit control pendant.



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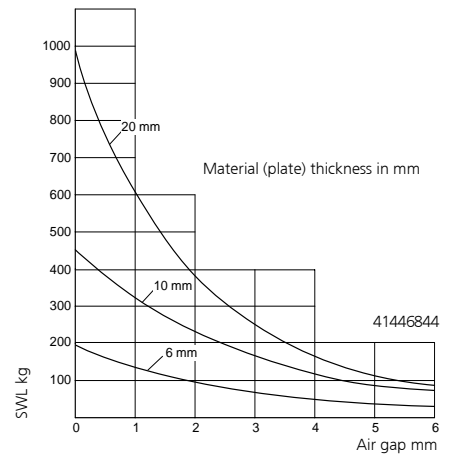


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R26 circular magnet technical data:
 Power consumption 0.14 kW
 Cyclic duration factor 80 and 100 %
 Weight approx. 37 kg
 Max. SWL with a safety factor of 2 = 1000 kg

Single magnet with integrated rectifier, switch and suspension eye. Power supplied by a separate electrical power source.



The diagram for the R26 shows that the SWL depends on the air gap between the surface of the material and the magnet and the thickness of the material. For safety reasons, the safe working loads given are based on a safety factor of 2.



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Size	P w	Weight kg	SWL for air gap d/300
R15	60	15	315
R20	80	17	490
R26	140	37	650
R30	400	75	725

RT15 – 30 circular magnets

Careful handling for spreader operation

Ferrous sheets and plates of large dimensions can create handling problems due to the sag which can occur with single-point lifting. Multi-magnet spreader units fitted with RT26 circular magnets can avoid these problems as sag is practically eliminated by correct distribution of the magnets over the surface area of the sheet or plate. This enables the largest size of plate to be handled. A wide variety of application solutions can be implemented with the corresponding separate electrical equipment. Sheets can be removed individually from a stack or flame-cutting benches cleared in one operation. It is also possible to pick up individual flame-cut pieces by selecting groups of magnets.

Other sizes are also available in addition to R15 – R30 circular magnets.



ESB rectangular magnets

The Demag bipolar magnet has been specially designed for lifting sections, tubes and round material. The poles are fitted to the outer frame of the very slim magnet casings for a highly concentrated magnetic flux. The two 20 x 9 cm and 30 x 12 cm sizes are ideally suited to handling short profile sections of up to 225 kg and 300 kg, respectively.

Accessory sets for attaching circular magnets to Demag DKUN electric chain hoists

An especially suitable lifting appliance is the all-purpose Demag DKUN chain hoist. With a wide variety of load capacity ranges, hoist speeds and features, they can be tailored to the needs of your application. An accessory set makes it possible to combine the circular magnet and the electric chain hoist into one unit. The accessory set consists of various parts which are combined together depending on the DKUN electric chain hoist type. Power is supplied to the magnet via a cable drum by means of a plug-and-socket device. The magnet is switched on and off using the integrated switch (with signal lamp). For remote magnet control, a suitable push-button control pendant is available, which must be selected depending on the operating characteristics of the DK electric chain hoist.

DKUN electric chain hoists

SWL kg	Size	FEM	Hook path m
100	DKUN 1-100	3 m	3; 4; 6
125	DKUN 1-125	2 m	3; 4; 6
160	DKUN 1-160	1 Am	3; 4; 6
200	DKUN 1-200	1Cm	3; 4; 6
160	DKUN 2-160	3 m	3; 4; 6; 8
200	DKUN 2-200	3 m	3; 4; 6; 8
250	DKUN 2-250	2 Am	3; 4; 6; 8
	DKUN 5-250	3 m	3; 4; 6; 8
315	DKUN 2-315	1 Am	3; 4; 6; 8
	DKUN 5-315	3 m	3; 4; 6; 8
400	DKUN 2-400	1 Cm	3; 4; 6; 8
	DKUN 5-400	2 m	3; 4; 6; 8
500	DKUN 5-500	1 Am	3; 4; 6; 8
	DKUN 10-500	3 m	3; 4; 6; 8
630	DKUN 5-630	1 Cm	3; 4; 6; 8
	DKUN 10-630	3 m	3; 4; 6; 8
800	DKUN 10-800	2 m	3; 4; 6; 8
1000	DKUN 10-1100	1 Am	3; 4; 6; 8
1250	DKUN 10-1250	1 Cm	3; 4; 6; 8

1/1 reeving

2/1 reeving with double the lifting capacity at half the lifting speed



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