



MAGNETIC ORIENTED



MAGNETIC
LIFTING
EQUIPMENT

FX and FXE Lifting magnets



Lifting magnets

Lifting magnets are ideal load lifting devices for everyone who has to work in a quick and safe way. They offer a lot of practical advantages; anywhere the moving of ferrous loads are necessary, for example: in material storage, transport industry, device construction and for loading and unloading of machinery.

We offer a broad assortment of several constructions and technical concepts.

We offer standard products for broad usage and also special magnets, which are specially geared towards the requirements of the clients.

To select the load lifting magnet, please consider the technical data at the end of the catalogue. All instructions relating to the holding force had been determined according to an inspection procedure for load lifting magnets with the norm EN 13155.!

Tested on a low carbon steel (test platform) of an appropriate thickness and a flatness of less than 0.1/500 mm.

In the case of particular handling requirements, don't hesitate to contact us - we are available for your queries at all times.



FX-Lift is the product line which has been developed in accordance to the user's need.



Permanent Lifting magnets



The FX base unit is suitable for flat and round material
Pag. 06



FX-R - suitable if you mostly lift round and/or hot material
Pag. 07



FX-P - for plates below 12 mm thickness and pipes - the right device for the Laser cutting system
Pag. 08



FX-V - Especially suitable for sections, beams and hot parts 150°C/100%
Pag. 09



FX-HV - especially for the horizontal and vertical transport
Pag. 10



FX-LT - light beam with 2-strand chain for sheet metal and work pieces with Centric Neck
Pag 11



Electro-Permanent Lifting magnets



FXE 50 - for plates from 4 mm and work pieces with a small air gap
Pag 17



FXE-L 50+ - long design with reinforced magnet system for tubes, beams and strips
Pag 18



FXE 80 - for lifting sheets from 8 mm; for massive parts with medium air gap
Pag 20



FXE-100 - for heavy plates, forgings, ingots
Pag 22



FXE-R - for round and flat material also in more layers
Pag 26



FXE-Z - with special demagnetizing
Pag 26



FXE-T - electro-permanent magnet trusses for sheet metal
Pag. 24



FXE-M - modular system for the construction of trusses or for Pick & Place Systems
Pag 28

FX Permanent Lifting magnets

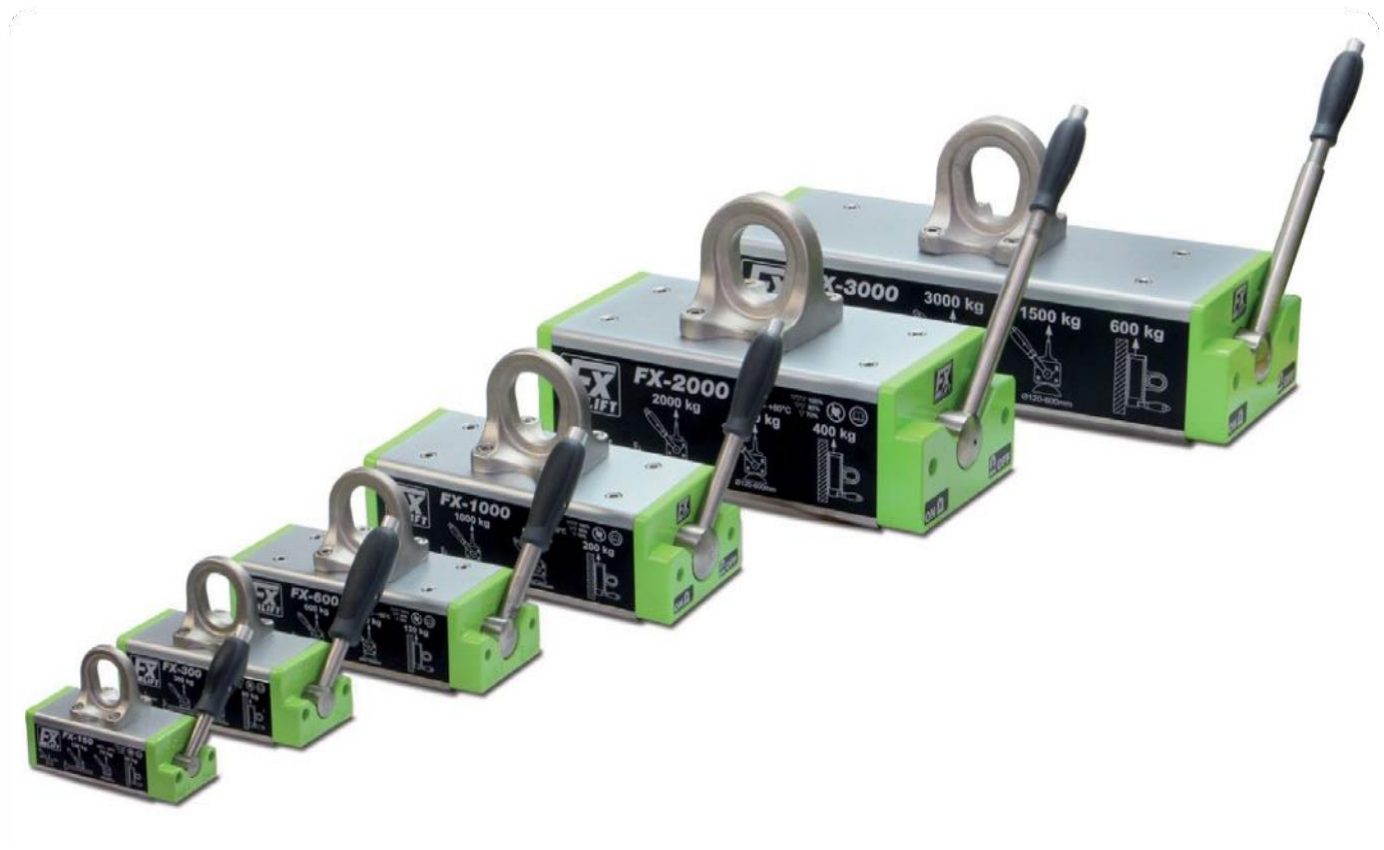
FX- Load Lifting Magnets represent the most innovative products in magnetic lifting technology.

They operate with a single magnet system, using high energy magnets, that are fully activated in a rotation of 90 degrees of the lever.

The operation and deactivation are rebound-free and self-braking.

The massive switching shaft, mounted on ball-bearing and the magnets (in a form of segments) don't generate any magnetic loss because of the internal short-circuit. It can be produced in one piece without welding and is restored without any millings for block magnets. This makes it almost indestructible.

The unique design of magnet segments and the reduction of air gap inside of the magnetic system provide higher efficiency with the same amount of magnetic material – which reduces costs and protects the environment.



Green Magnets for the modern Industry - Made in Germany



Exclusive Benefits of the FX-Series

FX - Economically the right decision

- Made in Germany
- Standard conformity and inspected CE/EN 13155/MRL 2006/42 EWG
- Product guarantee with German insurance company
- Multilingual documentation
- Environmentally friendly and future-proof by more power and lower SE magnet consumption
- 3 years Warranty
- Safety factor 3,5
- Guaranteed a spare parts supply for 10 years
- CAD files available

FX - Technically the right decision

- 100% nickel-plated
- High Energy segment magnets
- Lever rotation is only 90 °
- Large forged lifting eye (SF5)
- Great achievement with a compact design
- Short loading and unloading times
- No mechanical impairment of the Work piece
- Massive switching shaft
- Recoilless -free with one hand operation
- Adapted for flat and round materials
- Increased safety by simple operation

The large, forged crane eye is easily accessible and is higher ranked as the common hook sizes (SF5) in its category.

The safety ridges at the end of the button signal an entire block of the lever



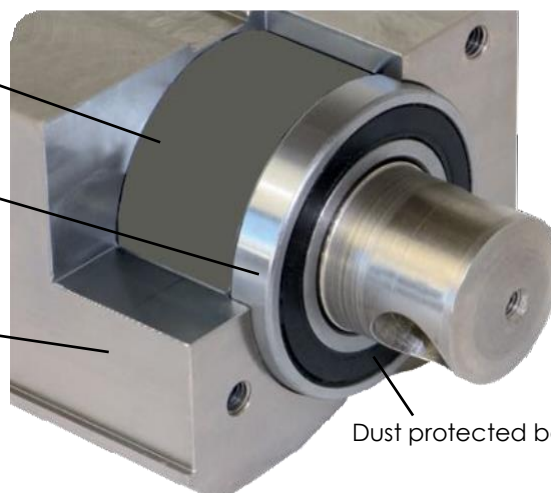
The strong lever with the one-hand switch mechanism (with hand brake system and ergonomic handle) is equipped with a high quality PAH-free synthetic material. It has a good grip and is easy to switch. Rebounded and self-locking

Laser type label of loading capacity

High energy magnets guarantee a stable performance until the maximum working temperature of 80°C at the center of the inner core. Even at these high temperatures, the FX reaches the standard safety factor.

The monoblock-magnet-shaft, in one piece, is completely nickel plated and ball bearing mounted without mechanical weak spots.

The Massive stator housing is in one piece and is completely nickel plated for a maximum corrosion protection.

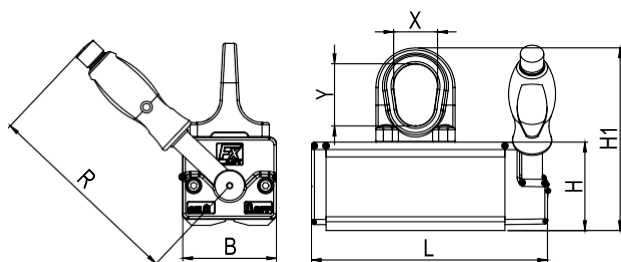


Dust protected ball bearing

FX Permanent Lifting magnets

FX Universal Permanent Lifting magnets

In the standard design, the FX lifting magnets have a broad spectrum of applications. The FX has good results with a large air gap as well as with thin, flat and round materials. A feature of this product is its highly sturdy nature and a good price performance.



Model	Article-Nr.	Max. Load capacity kg		Max. Load capacity from (mm)	Dimensions (mm)						Weight (kg)
		flat	round		L	B	H	H1	R	X/Y	
FX-150	1101 0150	150 kg	Ø50-200 mm 75 kg	8	161	64	60	124	136	30/42	3,6
FX-300	1101 0300	300 kg	Ø50-300 mm 150 kg	15	205	87	78	158	190	42/53	8,4
FX-600	1101 0600	600 kg	Ø80-400 mm 300 kg	20	288	112	94	189	228	51/62	19
FX-1000	1101 1000	1000 kg	Ø100-450 mm 500 kg	25	361	152	120	240	261	60/76	42
FX-2000	1101 2000	2000 kg	Ø120-600 mm 1000 kg	50	472	228	169	313	409	68/89	115
FX-3000	1101 3000	3000 kg	Ø250-600 mm 1500 kg	50	648	228	169	313	534	68/89	166

Safety factor 3,5/Test method EN 13155
max. Operation temperature 80°C • Load charts and Safety from Page 34

FX-R Permanent Lifting magnet especially suitable for Round material

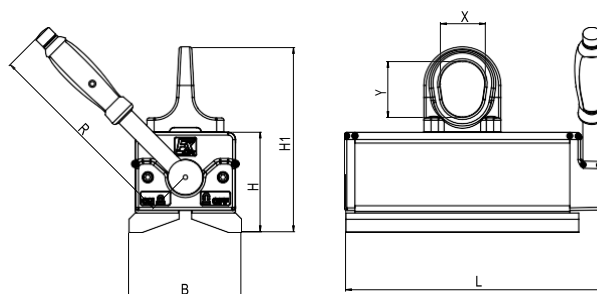
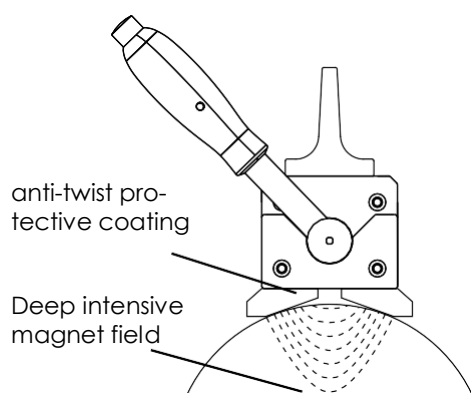
FX-R is the lifting magnet series for round material handling.

The deep, flat angle prism ensures a secure position on the load and conducts the magnet field into the interior of the material.

The magnet system can be activated over the entire diameter, without being rebounded.

Even thin, flat material is not a problem for the FX-R.

While handling hot pieces, the deep prism protects the magnetic core from overheating.



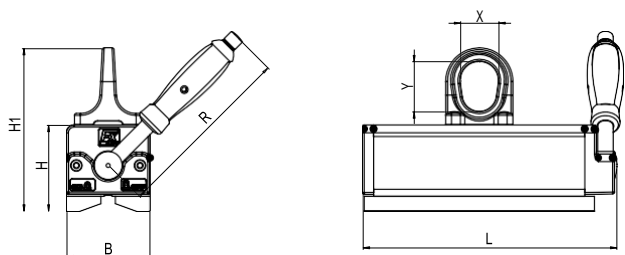
Model	Article-Nr.	Max. Load capacity kg		Max. Load capacity from (mm)	Dimensions (mm)						Weight (kg)
		flat	round		L	B	H	H1	R	X/Y	
FX-R100	1101 0101	100	∅ 25-150 mm 100 kg	8	161	70	68	132	136	30/42	4
FX-R225	1101 0221	225	∅ 50-205 mm 225 kg	10	205	98	90	170	190	42/53	9,5
FX-R450	1101 0451	450	∅ 50-270 mm 450 kg	20	288	126	112	207	228	51/62	22
FX-R750	1101 0751	750	∅ 70-370 mm 750 kg	20	361	170	142	262	261	60/76	49
FX-R1200	1101 1201	1200	∅ 120-560 mm 1200 kg	40	472	248	190	334	409	68/89	127
FX-R1800	1101 1801	1800	∅ 120-560 mm 1800 kg	40	648	248	190	334	534	68/89	182

Safety factor 3,5/Test method EN 13155
max. Operation temperature 80°C • Load charts and Safety from Page 34

FX Permanent Lifting magnets

FX-P Permanent Lifting magnets especially for thin sheets and pipes

FX-P is the lifting magnet series for professional lifting and moving thin plates, tubes and rods. The special magnet-configuration, which is connected with the FX-P prismatic pole, ensures a maximum magnetic flux density with thin material as well. The FX-P can be well positioned and easy activated on a round material.



For thin sheets

Model	Max. Load capacity at sheets and 4-edge pipes						Pipes and rods		
	3mm	4mm	6mm	8mm	10mm	15mm	LxB max.	Ø kg	L Ømm
FX-P170	50	80	120	170	170	170	2000x1250	150	30-105
FX-P330	70	100	160	300	330	330	2500x1250	300	40-160
FX-P650	100	160	200	450	530	650	3000x1500	550	60-210

Model	Article-Nr.	Max. Load capacity (kg)		Max. Load capacity from (mm)	Dimensions (mm)						Weight (kg)
		flat	round		L	B	H	H1	R	X/Y	
FX-P170	1101 0172	170 kg	Ø 30-105 mm 150 kg	8	195	64	70	134	136	30/42	5,1
FX-P330	1101 0332	330 kg	Ø 40-160 mm 300 kg	10	265	87	90	170	190	42/53	12,4
FX-P650	1101 0652	650 kg	Ø 60-210 mm 550 kg	20	352	112	108	203	228	51/62	26

Safety factor 3,5/Test method EN 13155
max. Operation temperature 80°C • Load charts and Safety from Page 34

FX-V Permanent Lifting magnets with 90° Prism for beams, profiles and hot parts

FX-V Lifting Magnets are geared to particular areas of application in steel, ship and container building.

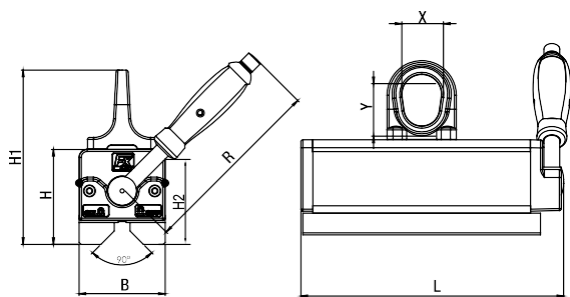
They have a long, slim design for lifting beams and profiles – also inside the beam – and compared with the relatively low material thickness, it reaches a maximum holding force so even thin plates can be lifted safely. Because of the 90° prism, the angle profiles can be lifted safely. While lifting hot flame cuts, the deep prism protects the inserted magnets from the heat.

Like all the types of FX, the FX-V has a completely nickel-plated magnetic coil and provides excellent inspection results, even with rough surfaces.

The FX-V will be activated by a single stable, smooth running lever.



150°C/100%



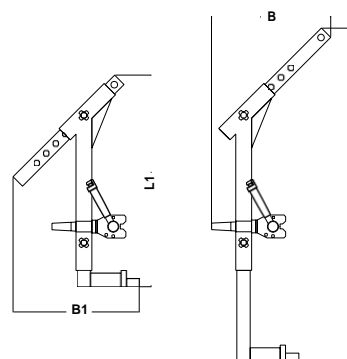
FX-V	H2 (mm)	IPE	HEB
FX-V 200	65	from IPE 80	from HEB 100
FX-V 400	87	from IPE 100	from HEB 120
FX-V 800	106	from IPE 140	from HEB 160

Model	Article-Nr.	Max. Load capacity(kg)		Max. Load capacity from (mm)	Dimensions (mm)						Weight (kg)	
		flat	round		L	B	H	H1	R	X/Y		
FX-V200	1101 0203	200 kg	Ø 20-50 mm 100 kg	120 kg	10	195	64	77	141	134	30/42	5,5
FX-V400	1101 0403	400 kg	Ø 25-60 mm 200 kg	250 kg	15	265	87	96	176	188	42/53	13
FX-V800	1101 0803	800 kg	Ø 35-75 mm 300 kg	400 kg	20	352	112	115	210	228	51/62	28

Safety factor 3,5/Test method EN 13155 • max. temperature in the magnetic core 80°C
max. temperature of the workpiece 150°C/100% • Load charts and Safety from Page 34

FX-HV Horizontal-Vertical Systems

The FX-HV Horizontal – Vertical System with its various settings can satisfy all requirements. Pins can adjust the total height and the barycenter. The support pins are positioned in such a way that vertical, circular blanks can be lifted, which is mostly needed on the saw. They can also lift washers and sheets. For horizontal transport, the system has a crane eyelet on the back. The steel construction is stable with a completely powder coated surface and the FX lifting magnet ensures maximum safety. Special dimensions are available on request.



Model	Articel-Nr.	Slices -Ø (mm)	Flat material Dimension (mm)	Max. Load capacity with stop (kg)	Max. Load capacity without stop (kg)	Dimensions (mm)				Weight (kg)
						L	B	L1	B1	
FX-HV 200	1103 0202	250 - 750	2000 x 750	200	40	1000	400	715	390	24
FX-HV 400	1103 0402	400 - 1000	2000 x 1000	400	80	1250	450	795	475	31
FX-HV 800	1103 0802	500 - 1200	2500 x 1250	800	160	1500	500	1040	520	64
FX-HV 2000	1103 2002	500 - 1200	2500 x 1250	2000	400	1800	600	1200	650	162
FX-HV 3000	1103 3002	500 - 1200	2500 x 1250	3000	600	1800	600	1200	650	213

max. Operation temperature 80° • Weight incl. Magnet

FX-LT Permanent Lifting magnet Truss

FX-LT Magnet Traverses will be adapted to the needs of sheet metal fabricators, laser cutters and flame cutters.

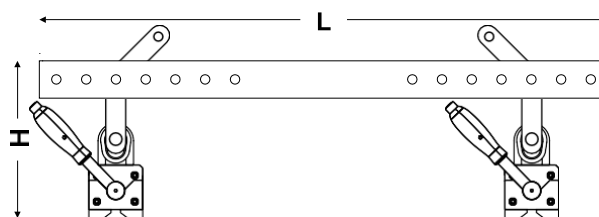
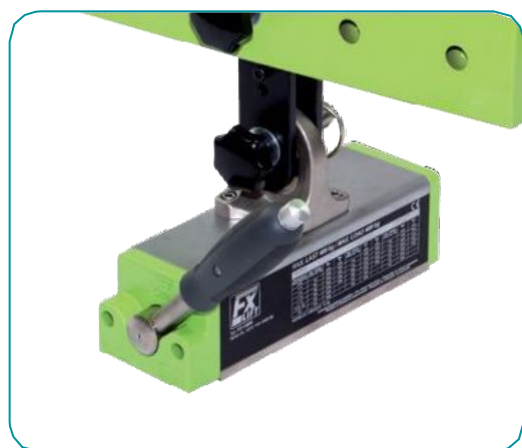
Two FX-V lifting magnets within a certain distance, strengthened by a traverse with two-chain suspensions, allow loading and unloading of machines with sheets or the vertical lifting of workpieces with a center cutout. With a few simple hand movements, the magnets can be removed from the traverse for lifting blanks and small plates with only one magnet.

Delivery contents:

- 2 Lifting magnets
- Two-chain suspensions with hooks and eyelets
- Traverse with lifting elements

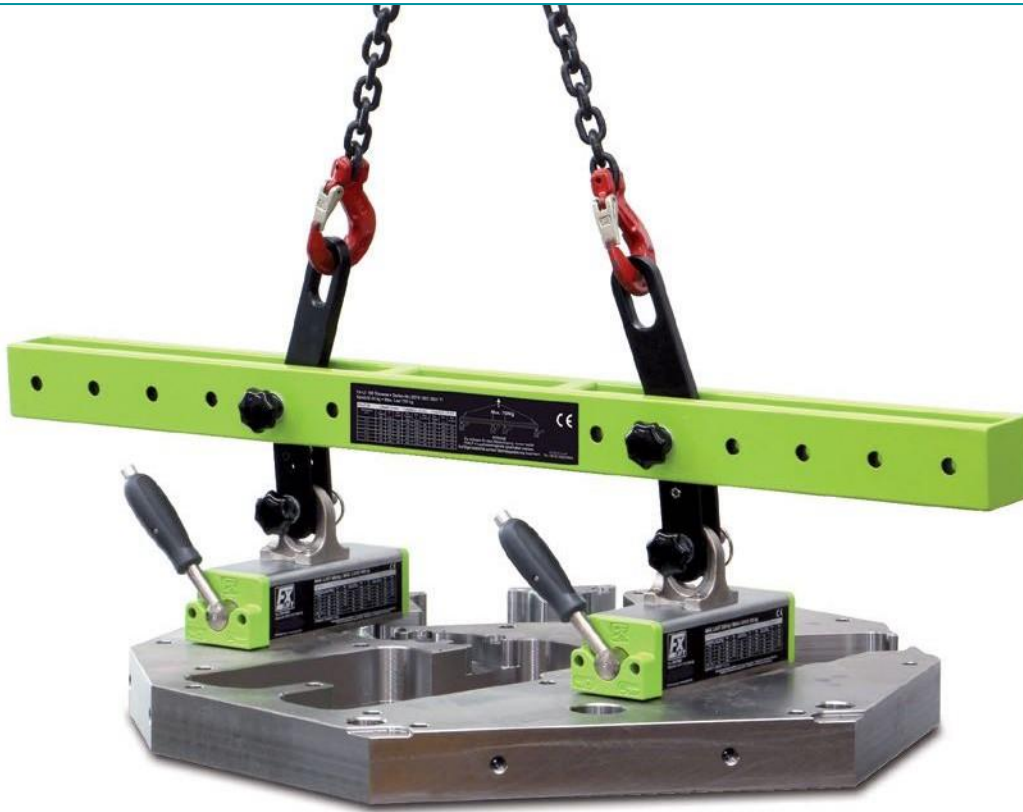


Can be easily dismantled for single use



Model	Article-Nr.	incl. 2x FX	Max. Load (kg)	Capacity from (mm)	Max. Workpiece Dimensions (mm)	Dimensions (mm)		Weight (kg)
						L	B	
FX-LT700	1104 0700	FX-V400	700	15	4000 x 1500	1600	270	44
FX-LT1000	1104 1000	FX-600	1000	20	4000 x 2000	1600	291	58
FX-LT1400	1104 1400	FX-V800	1400	20	5000 x 2000	1600	360	86
FX-LT3200	1104 3200	FX-2000	3200	50	5000 x 2500	2000	480	305
FX-LT4800	1104 4800	FX-3000	4800	50	6000 x 2500	2000	600	410

FX-LT Permanent Lifting magnet Truss



FX-LT700			
Material thickness (mm)	Max. Dimensions (mm)		Max. Load (kg)
	L (max)	B (max)	
>= 4	3000	1500	180
>= 6	3500	1500	260
>= 8	4000	1500	490
>= 10	4500	1000	610
>= 15	5000	2000	700

FX-LT1000			
Material thickness (mm)	Max. Dimensions (mm)		Max. Load (kg)
	L (max)	B (max)	
>= 4	3000	1500	180
>= 6	3000	1500	250
>= 8	4000	1500	300
>= 10	4500	1500	500
>= 15	4500	1500	820
>= 20	5000	1500	1000

FX-LT1400			
Material thickness (mm)	Max. Dimensions (mm)		Max. Load (kg)
	L (max)	B (max)	
>= 4	3000	1500	180
>= 6	3000	2000	350
>= 8	4000	2000	700
>= 10	4500	2000	800
>= 15	5000	2000	1130
>= 20	5000	2000	1400

FX-LT3200			
Material thickness (mm)	Max. Dimensions (mm)		Max. Load (kg)
	L (max)	B (max)	
>= 15	4000	2000	800
>= 20	5000	2000	1600
>= 25	5000	2000	1920
>= 40	5000	2500	2560
>= 50	5000	2500	3200

FX-LT4800			
Material thickness (mm)	Max. Dimensions (mm)		Max. Load (kg)
	L (max)	B (max)	
>= 15	5000	2000	1200
>= 20	5000	2000	2400
>= 25	5000	2500	2880
>= 40	5000	2500	3840
>= 50	5000	2500	4800

FX-KT Small Size Beam

The horizontal beam FX-KT is ideal for working on metal sheets and laser cutting. Two FX Lifter are fixed with adjustable distance on the horizontal beam allowing the handling of different loads. In particular rings and cylindrical elements.



Model	Art.-Nr.	Max. Load (kg)	Capacity from thickness (mm)	Dimensions (mm)			Regulation of the FX magnet - internal angle (mm)	Weight (kg)
				L	B	H		
FX-KT 240	1105 0240	240	8	390	161	233	0-390	15
FX-KT 480	1105 0480	480	15	620	205	269	0-420	26

FX Lifting magnets in Special version

Special option FX with double "lifting eyelets" for FX lifting magnets. The lifting magnets can be equipped with an extra eyelet for the vertical transportation of lighter elements.



Model	Article-Nr.	Max. towing capacity (kg)
FX-150 towing eyelet	8 1101 0001	25
FX-300 towing eyelet	8 1101 0002	60
FX-600 towing eyelet	8 1101 0003	120
FX-1000 towing eyelet	8 1101 0004	200



FXE Electro-Permanent Lifting magnets

The electro-permanent magnet technology guarantees maximum safety.

The advantages and reliability of permanent magnets and the user-friendly electromagnets are united into a single concept.

In the case of a cable cut or power failure, the lifted load cannot drop down. There is no need for battery maintenance; the activation and deactivation are done either by pushing a button on the magnet via a remote control or signal output, controlled by the customer himself. Depending on the application, the FXE product line offers different concepts.

FXE Electro-Permanent Lifting magnets

FXE Electro-Permanent Lifting Magnets are equipped with on-board control technology directly connected to mains voltage – the fast and user friendly Plug and Play solution for loads weighing up to 7,2 tons.

In the FXE-Z versions, with a special demagnetization cycle and FXE-R for round materials, function for both single bars and layers



FXE-T Electro-Permanent Lifting magnet Trusses

Electro-permanent magnetic trusses with on-board control technology are directly connected to the main voltage.

Standards for sheets to 6000 x 3000 mm and 6,4t or trusses tailored to the customer's requirements are directly connected to the main and are easy to install.



FXE-M Electro-Permanent Lifting magnet modules

The electro-permanent lifting magnet system in a modular construction consists of many possible composition interdependent controls.

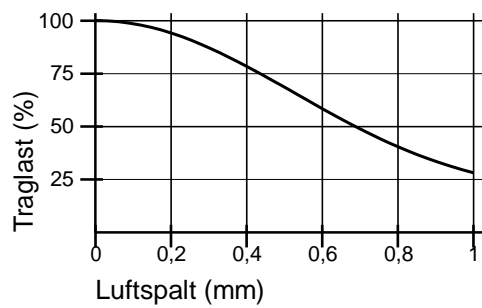
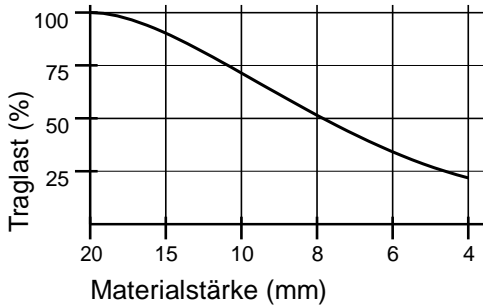
The electro-permanent lifting magnet systems in modular structures, come in a variety of designs and magnetic matching control units that can be matched together for crane operation or automated pick and place requirements.



Within the described application concepts the FXE, it has four different types of magnetic fields, defined by different pole structures.

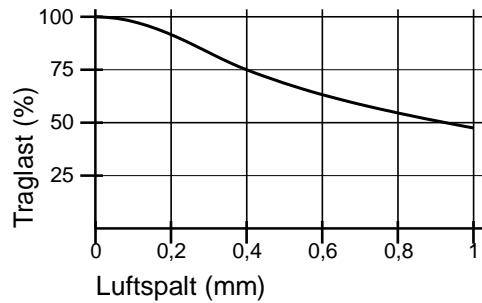
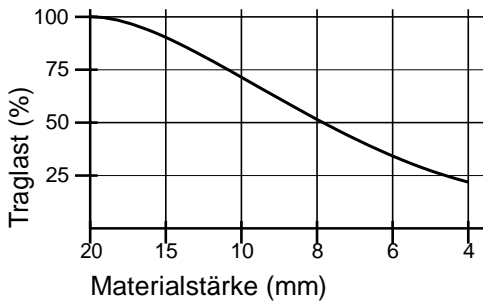
Depending on the requirements profile, it's important to choose the appropriate terminal type.

Pole Type 50



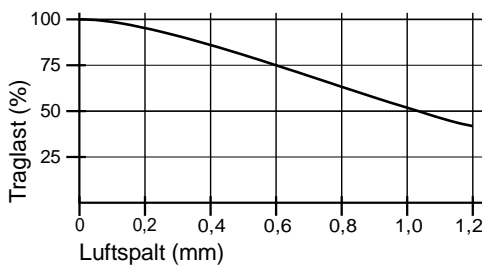
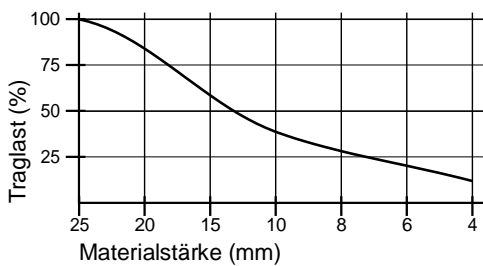
Pole Type 50 is designed for lifting sheets starting at a length of 4 mm and steel components with a plane or machined surface. The nominal values of the FXE lifting magnets, with pole type 50, can be achieved until an air gap of 0,3 mm. With air gap 0, the pole type 50 reaches a holding force of 3.8 kN.

Pole Type 50+



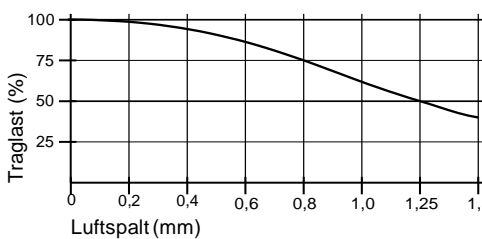
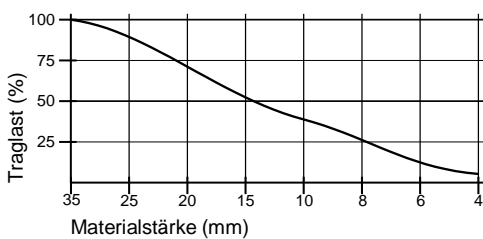
Pole Type 50+ has a strengthening magnetic system with the same pole size as the pole type 50. This means on poor surfaces, the holding force can be improved, especially if pole extensions are required. With air gap 0, the pole type reaches 50+.

Pole Type 80



Pole Type 80 is designed for lifting sheets starting at 8 mm and solid steel components and flame cuts with a medium air gap. The nominal value of the FXE lifting magnets with pole type 80 are achieved to an air gap of 0,4 mm. With air gap 0, the pole type 80 achieves a holding force of 9 kN.

Pole Type 100



Pole Type 100 is designed for lifting heavy plates starting at a length of 12 mm and solid steel elements, moulded and forging parts with larger air gap. The nominal values of the FXE lifting magnets with pole type 100 are achieved up to an air gap of 0,6mm. With air gap 0, the pole type reaches a holding force of 14.5 kN.

FXE Electro-Permanent Lifting magnets

The FXE lifting magnets are the professional solution for common handling work pieces.

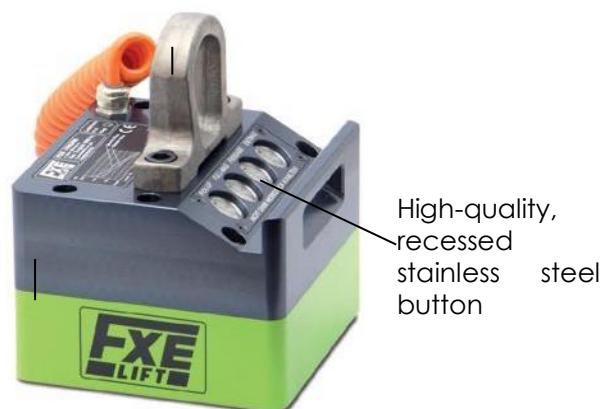
They are robustly built and designed for continuous use. The electrical control allows the operator to turn the unit without any physical effort, even in hard to reach areas. The permanent magnet system can be activated by the push button in 0.8 seconds, and when you turn it off, the work piece is released safely. The connection is made easy through the mains voltage. Thus, the device is ready for use with very low installation effort. If the power fails, the load is held by the permanent magnet field. For this, no prone- and maintenance-intensive back-up batteries are necessary.

A quick change of crane installations with conventional mains-powered is possible.

FXE Lifting Magnets comply with the latest standards and offer maximum safety and ease of use. With our standard sizes up to 7200 kg, we have the right equipment for almost any application.

Stable housing with forged lifting eye

Magnetic module in monoblock design



FXE-300/50 • FXE-500/50 Electro-Permanent Lifting magnets

Equipped with pole structure 50 and a maximum load capacity of 300/500 kg, which is achieved at thicknesses from 15 mm. For small magnetically active areas, this device is easily controlled and used for lifting serial parts, blanks and small castings and forgings.

FXE-300/50			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 4 mm	70 kg	1800	1500
from 6 mm	140 kg	2000	1500
from 8 mm	200 kg	2000	1500
from 10 mm	280 kg	2000	1500
from 15 mm	300 kg	2000	1500

FXE-500/50			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 4 mm	100 kg	1800	1500
from 6 mm	200 kg	2000	1500
from 8 mm	300 kg	2000	1500
from 10 mm	400 kg	2000	1500
from 15 mm	500 kg	2000	1500



Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface (mm)	Weight (kg)
			L	B	H					
FXE-300/50	1060 0301	300	164	164	420	4	50	14	116x116	23
FXE-500/50	1060 0501	500	234	164	420	6	50	22	180x116	31

FXE - Electro-Permanent Lifting magnets

FXE-750/50 • FXE-1100/50 • FXE-1600/50 Electro-Permanent Lifting magnets

Equipped with pole structure 50 and a maximum load capacity of 750/1100/1600 kg which is achieved at thicknesses from 15 mm. For small magnetically active areas, this device is easily controlled and used for lifting plates, laser and internal parts, tools and blanks.



FXE-750/50			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 4 mm	150 kg	1800	1500
from 6 mm	250 kg	2000	1500
from 8 mm	400 kg	2000	1500
from 10 mm	600 kg	2000	1500
from 15 mm	750 kg	3000	1500

FXE-1100/50			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 4 mm	200 kg	2000	1500
from 6 mm	370 kg	3000	1500
from 8 mm	600 kg	3000	1500
from 10 mm	900 kg	3000	1500
from 15 mm	1100 kg	3000	1500

FXE-1600/50			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 4 mm	300 kg	3000	1500
from 6 mm	500 kg	3000	1500
from 8 mm	800 kg	3000	1500
from 10 mm	1400 kg	3000	1500
from 15 mm	1600 kg	3000	2000

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-750/50	1060 0701	750	298	164	250	8	50	30	244x116	27
FXE-1100/50	1060 1101	1100	420	164	270	12	50	40	372x116	39
FXE-1600/50	1060 1601	1600	620	164	270	18	50	60	564x116	56

FXE Electro-Permanent Lifting magnets

FXE-L Electro-Permanent Lifting magnets

Equipped with pole structure 50+ in a long narrow design and a maximum working load of 400/600/1000 kg, which is achieved at thicknesses from 15 mm. For small magnetically active areas, this device is easily controlled and used for lifting strips, bars, pipes, beams and rods. Also, using pole extensions allow it to position the magnets on long narrow loads.



FXE-L400/50+ Electro-Permanent Lifting magnets



FXE-400/50+			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 4 mm	70 kg	1800	1000
from 6 mm	140 kg	2000	1000
from 8 mm	200 kg	2000	1000
from 10 mm	250 kg	2500	1000
from 15 mm	400 kg	3000	1000

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface (mm)	Weight (kg)
			L	B	H					
FXE-L 400/50+	1060 0411	400	294	95	450	4	50+	14	244x52	23

FXE-L600/50+ Electro-Permanent Lifting magnets



FXE-L600/50+			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 4 mm	100 kg	2000	1000
from 6 mm	200 kg	2500	1000
from 8 mm	300 kg	2500	1000
from 10 mm	350 kg	3000	1000
from 15 mm	600 kg	4000	1000

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface (mm)	Weight (kg)
			L	B	H					
FXE-L 600/50+	1060 0611	600	420	95	450	6	50+	22	372x52	31

FXE-L1000/50+ Electro-Permanent Lifting magnets



FXE-L1000/50+			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 4 mm	150 kg	2500	1500
from 6 mm	300 kg	3000	1500
from 8 mm	400 kg	3000	1500
from 10 mm	500 kg	4000	1500
from 15 mm	1000 kg	5000	1500

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface (mm)	Weight (kg)
			L	B	H					
FXE-L 1000/50+	1060 1011	1000	680	95	450	10	50+	38	628x52	44

FXE Electro-Permanent Lifting magnets

FXE-1000/80 Electro-Permanent Lifting magnets

Equipped with pole structure 80 and a maximum load capacity of 1000 kg which is achieved at thicknesses from 25 mm. For small magnetically active areas, this device is easily controlled and used for lifting heavy plates, plasma and lame-cut parts, tools and blanks.



FXE-1000/80			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 8 mm	200 kg	2000	1500
from 10 mm	300 kg	2000	1500
from 15 mm	600 kg	2000	1500
from 25 mm	1000 kg	2000	1500

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-1000/80	1060 1002	1000	228	228	295	4	80	36	172x172	39

FXE-2500/80 Electro-Permanent Lifting magnets

Equipped with pole structure 80 and a maximum load capacity of 2500 kg, which is achieved at thicknesses from 25 mm. For small magnetically active areas, this device is easily controlled and used for lifting heavy plates, plasma and lame-cut parts, tools and blanks.



FXE-2500/80			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 8 mm	500 kg	2000	1500
from 10 mm	750 kg	3000	1500
from 15 mm	1500 kg	3000	1500
from 25 mm	2500 kg	3000	2000

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-2500/80	1060 2502	2500	506	228	295	10	80	90	448x172	77

FXE-4000/80 Electro-Permanent Lifting magnets

Equipped with pole structure 80 and a maximum load capacity of 4000 kg which is achieved at thicknesses from 25 mm. For small magnetically active areas, this device is easily controlled and used for lifting heavy plates, plasma and lame-cut parts, tools and blanks. The outside, offset control and operating unit make it easier to clear firing and machine tables.



FXE-4000/80			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 8 mm	800 kg	3000	1500
from 10 mm	1200 kg	3000	1500
from 15 mm	2400 kg	3000	1500
from 25 mm	4000 kg	4000	1500

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-4000/80	1060 4002	4000	783	228	295	16	80	144	724x172	132

FXE-1600/100 Electro-Permanent Lifting magnets

Equipped with pole structure 100 and a maximum load capacity of 1600/2400 kg which is achieved at thicknesses from 35 mm. For small magnetically active areas, this device is easily controlled and used for lifting forgings, heavy plates, plasma and internal parts, tools, ingots...



FXE-1600/100			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 10 mm	400 kg	2000	1500
from 20 mm	1000 kg	2000	1500
from 35 mm	1600 kg	3000	1500

FXE-2400/100			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	Max. Dimensions		
	max. Load	L (max.)	B (max.)
from 10 mm	600 kg	2000	1500
from 20 mm	1500 kg	3000	1500
from 35 mm	2400 kg	3000	1500

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-1600/100	1060 1603	1600	296	296	125	4	100	58	222x222	82
FXE-2400/100	1060 2403	2400	415	296	335	6	100	87	342x222	118

FXE-3200/100 Electro-Permanent Lifting magnets

Equipped with pole structure 100 and a maximum load capacity of 3200 kg which is achieved at thicknesses from 35 mm. For small magnetically active areas, this device is easily controlled and used for lifting forgings, heavy plates, plasma and internal parts, tools, ingots...



FXE-3200/100			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 10 mm	800 kg	3000	1500
from 20 mm	2200 kg	3000	1500
from 35 mm	3200 kg	4000	1500

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-3200/100	1060 3203	3200	536	296	335	8	100	112	462x222	78

FXE-4800/100 • FXE-7200/100 Electro-Permanent Lifting magnets

Equipped with pole structure 100 and a maximum load capacity of 4800/7200 kg which is achieved at thicknesses from 35 mm. For small magnetically active areas, this device is easily controlled and used for lifting forgings, heavy plates, plasma and internal parts, tools, ingots...



FXE-4800/100			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 10 mm	1200 kg	3000	1500
from 20 mm	3000 kg	4000	2000
from 35 mm	4800 kg	4000	2000

FXE-7200/100			
Max. Load capacity at sheets and 4-edge pipes			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 10 mm	1800 kg	3000	1500
from 20 mm	3300 kg	4000	2000
from 35 mm	7200 kg	4000	2500

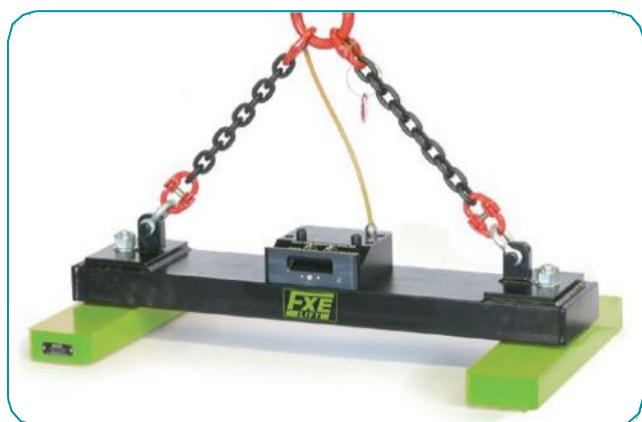
Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Clamping surface(mm)	Weight (kg)
			L	B	H					
FXE-4800/100	1060 4803	4800	778	296	400	12	100	168	702x222	202
FXE-7200/100	1060 7203	7200	778	415	400	18	100	252	702x342	298

FXE-T2500/50 • FXE-T4000/80 Lifting magnet Truss

FXE-T 2500/50 and 4000/80 Electro-permanent Lifting Magnet Trusses have a compact design with on-board control technology designed for the frequent transfer of larger formats. They can, like the FXE Lifting Magnets, be operated directly on the main voltage and are installed quickly and ready for use. The unit is controlled directly on the device or with a remote control.



Radio/IR-remote control optionally!



FXE-T 4000/80

FXE-T2500/50			
Max. Load capacity on sheets			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 4 mm	500 kg	4000	1500
from 6 mm	750 kg	4000	1500
from 8 mm	1250 kg	4000	2000
from 10 mm	1750 kg	4000	2000
from 15 mm	2550 kg	4000	2500

FXE-T4000/80			
Max. Load capacity on sheets			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 4 mm	350 kg	4000	1500
from 6 mm	700 kg	4000	1500
from 8 mm	1000 kg	4000	2000
from 10 mm	1250 kg	4000	2000
from 15 mm	2500 kg	5000	2500
from 25 mm	4000 kg	5000	2500

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	PoleTyp	Breakaway (kN)	Weight (kg)
			L	B	H				
FXE-T-2500/50	1013 2503	2500	1000	630	380	2x18	50	96	138
FXE-T-4000/80	1013 4003	4000	1200	500	380	2x10	80	170	175

FXE-T6400/80 Lifting magnet Truss

The FXE T 6400/80 Electro-Permanent Lifting Magnet Truss comes standard, fully-featured with all the options.

The truss, with 6400 kg max. Carrying capacity, is held with sliding magnetic modules and can safely move sheet formats of min. 1200 mm and max. 6000 mm length.

Delivery includes:

- Radio remote control with Pick Up function to lift individual plates from 6mm
- Weld-on hooks on the sides each 4t max.
- 2-strain chains
- Lifting-eyelet sensor, demagnetizing only when load is free
- 360° LED signal tower
- Stainless steel guide handles
- Primary connection cable ready for 400V/25A fuse/CEE 32A plug



FXE-T6400/80			
Max. Load capacity on sheets			
Material-/ Wall thickness	max. Load	Max. Dimensions	
		L (max.)	B (max.)
from 4 mm	500 kg	4000	2000
from 6 mm	1000 kg	6000	2500
from 8 mm	1400 kg	6000	2500
from 10 mm	2000 kg	6000	3000
from 15 mm	4000 kg	6000	3000
from 25 mm	6400 kg	6000	2000

Model	Article-Nr.	Max. Load capacity (kg)	Dimens. (mm)			Pole °N	Pol Typ	Breakaway (kN)	Weight (kg)
			L	B	H				
FXE-T-6400/80	1013 6403	6400	3150	780	1900	2x16	80	272	520



FXE Electro-Permanent Lifting magnets

FXE-R Electro-Permanent Lifting magnets

FXE-R Lifting Magnets can pick up round, rotary and flat material. We manufacture from our FXE-based models with pole shoes, which can customize and raise the diameter bandwidths individually or in layers.



Model	Article-Nr.	Max. Load cap. (kg)		Dimens. (mm)			Pole °N	Pole Typ	Breakaway (kN)	Weight (kg)
		flat	round	L	B	H				
FXE-R 2400/100	1062 2403	2400	∅120-420 mm 1200 kg	536	296	370	8	100	80	158

Consistent sample model, many other Versions available

FXE-Z Electro-Permanent Lifting magnets

FXE-Z Lifting Magnets with additional demagnetizing are produced from our FXE- basic models with an adjusted magnet system.

With FXE-Z, work pieces that keep disturbing residual magnetism after transportation, such as alloyed mold plates or hardened driving and bearing parts, can be moved and demagnetized. It should be noted that this design and magnetic power is clearly higher than the standard FXE models. The quality of demagnetization depends on the work piece, therefore not every request can be met.



Model	Article-Nr.	Max. Load cap. (kg)	Dimens. (mm)			Pole °N	Pole structure	Breakaway (kN)	Weight (kg)
			L	B	H				
FXE-Z 500/80	1064 0512	500	430	230	295	8	80	18	60

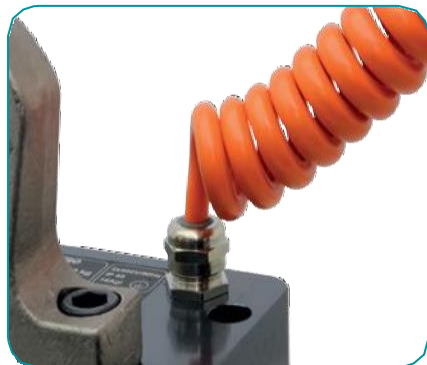
Consistent sample model, many other Versions available

The FXE electro permanent lifting magnet series can be customized by adding intelligent accessories to further increase productivity and safety.

Spiral cable

Included in the standard package are a 2 m heavy rubber hose line and a CEE three-phase connector (16/32A).

High-quality spiral cables are best with small fast hoists up to 4 m in hook height.



Eyelet-Sensor

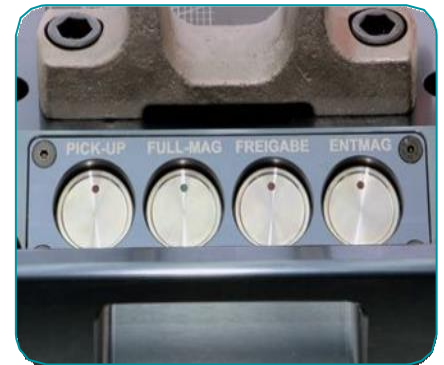
The eyelet-sensor checks whether the lifting eye on the magnet is on the load, and only allows demagnetization if it is not.

This provides more security, and prevents the possibility, for example, of slugs on a discard container.



Pick Up function

The "pick-up" option is for taking one thin sheet of a stack. Similarly, the "pick-up" adds another safety feature. A floating load in reduced mode can be magnetized, and then it can be considered by a standardized safety factor.



Special pole shoes

For receiving hot parts, we recommend using heat-protection pole shoes, or form pole shoes for round materials, profiles or bulky castings. We produce custom made pole shoes so that the receiving surface matches the load.



Remote control in radio or infrared technology.

The remote control can be used in both radio and infrared technology. IR has price advantages, but requires a direct line of sight to the receiver and has a short range of only about 5 m. Radio has a range of at least 30 m, but we recommend the use of a radio FB addition to the Eyelet-Sensor option.



Guide handle

Especially when removing small work pieces from the flame cutting table, the magnet can be positioned to the crane, and it must be done manually. For this, we recommend the guide handle. With an integrated circuit, it allows the operator to easily clear the internal table from the side.

Article	Article-Nr.	Weight (kg)
Spiral cable 3x2.5 1-5m	1013 5325	2
Spiral cable 3x2.5 0,5-2m	1013 5326	1
Spiral cable 4x4mm ² 1-5m (ab FXE 300 verw.)	1013 626	3
4x6 mm ² Spring cable reel 10m	1016 0001	34
5x2,5mm ² Spring cable reel 10m	1016 0002	20

Article	Article-Nr.	Weight (kg)
Eyelet-Sensor FXE	8 1060 0001	1
Eyelet-Sensor Trusses	8 1060 0002	2
Pick Up Option	8 1060 0003	-
Special pole shoes	on request	-
Radio remote control	1013 6001	-
IR remote control	1013 6002	-
Guide handle FXE	8 1060 0005	15

FXE Electro-Permanent Lifting magnets

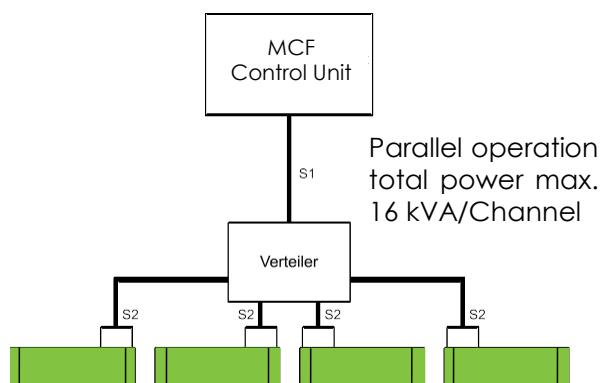
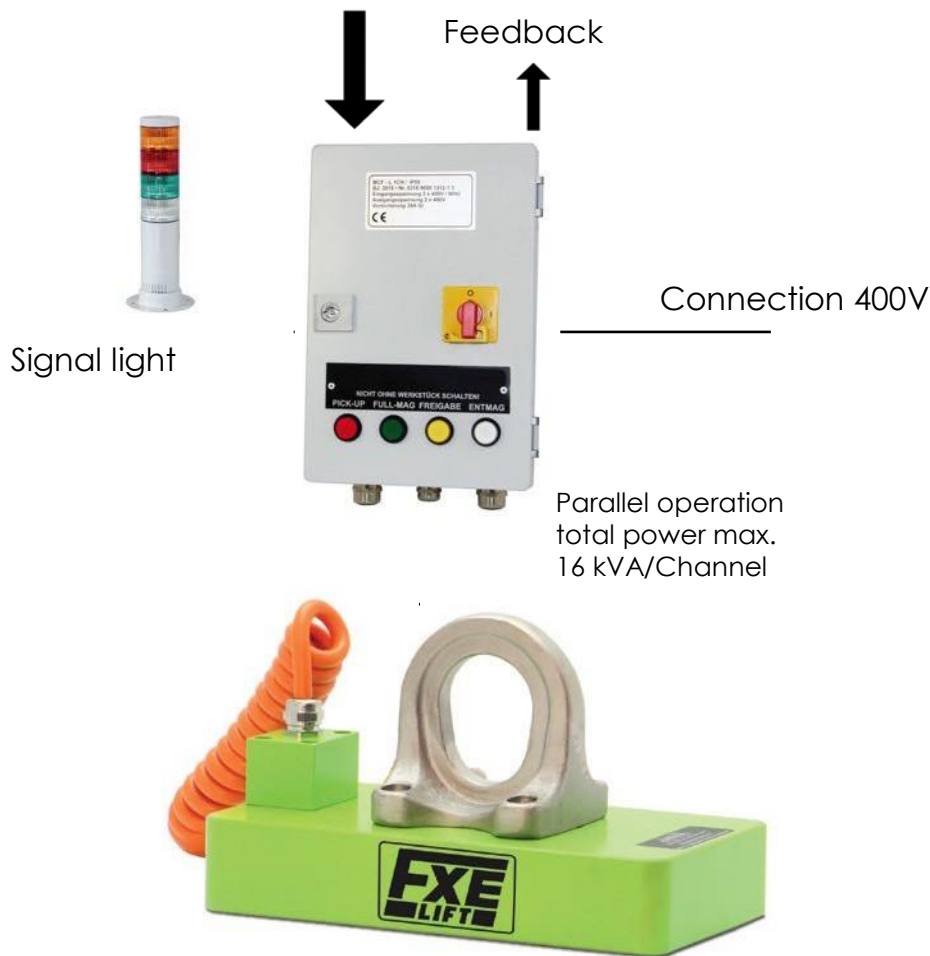
FXE-M Electro-Permanent Lifting magnets

FXE-M Electro-Permanent Lifting Magnet modules can be put together in conjunction with MCF magnetic control units creating modular lifting systems.

A single FXE-M module can be commanded by a single MCF-1 channel controller, while 4 FXE-M modules may be jointly or individually driven by an MCF-4 channel controller, operating, for instance, in a fully automatic profile steel plant. FXE-M modules have been proven thousands of times over many years in cranes, manipulators, conveyors.

FXE-M modules are made with monoblock technology and are extremely solid. Depending on the specific application there is a choice between 4 different terminal types and their matching magnet module.

Control via radio, hand switch,
crane - radio, machine control



Connecting several FXE-M modules

	Length cable max. S1 + S2 max. (m)	
	3 x 2,5 ²	3 x 4 ²
up to 8 kVA	20	30
up to 16 kVA	6	15

FXE Electro-Permanent Lifting magnets

Model	Article-Nr.	Max. Load capacity		Dimension (mm)			Pole °N	Pole structure	Breakaway (kN)	Weight (kg)
		(kg)	ab (mm)	L	B	H				
FXE-M 150/50	1061 0101	150	15	164	95	64	2	50	7	6
FXE-M 300/50	1061 0301	300	15	164	164	64	4	50	14	12
FXE-M 400/50	1061 0401	400	15	294	95	64	4	50	14	12
FXE-M 500/50	1061 0501	500	15	234	164	64	6	50	21	16
FXE-M 600/50	1061 0601	600	15	420	95	64	6	50	21	16
FXE-M 750/50	1061 0701	750	15	298	164	64	8	50	20	20
FXE-M 1000/50	1061 1001	1000	15	680	95	64	10	50	36	28
FXE-M 1100/50	1061 1101	1100	15	420	164	64	12	50	40	32
FXE-M 1600/50	1061 1601	1600	15	620	164	64	18	50	60	46
FXE-M 400/50+	1061 0411	400	15	294	95	83	4	50+	14	16
FXE-M 600/50+	1061 0611	600	15	420	95	83	6	50+	21	20
FXE-M 1000/50+	1061 1011	1000	15	680	95	83	10	50+	36	38
FXE-M 1000/80	1061 1002	1000	25	228	228	89	4	80	36	30
FXE-M 2500/80	1061 2502	2500	25	506	228	89	10	80	86	70
FXE-M 4000/80	1061 4002	4000	25	783	228	89	16	80	140	107
FXE-M 1600/100	1061 1603	1600	35	295	296	125	4	100	58	72
FXE-M 2400/100	1061 2403	2400	35	415	296	125	6	100	87	104
FXE-M 3200/100	1061 3203	3200	35	536	296	125	8	100	112	138
FXE-M 4800/100	1061 4803	4800	35	778	296	125	12	100	168	196
FXE-M 7200/100	1061 7203	7200	35	778	415	125	18	100	252	286

Please note declaration for pole structure characteristics page 17 • Workpiece temperature up to 100°C
Optionally with pole shoes for Round material, Profiles, hot Workpieces available
at switching frequency >3/min please query

Model	Voltage (V)	Power (kVA) Impulse	Ohm resistor	Lifting power EN13155 (kg)	clamping surface mm
FXE-M 150/50	400-480	0,6	49	150	116x52
FXE-M 300/50	400-480	1,2	25	300	116x116
FXE-M 400/50	400-480	1,2	25	400	244x52
FXE-M 500/50	400-480	1,8	16	500	180x116
FXE-M 600/50	400-480	1,8	16	600	372x52
FXE-M 750/50	400-480	2,4	12	750	244x116
FXE-M 1000/50	400-480	3	10	1000	628x52
FXE-M 1100/50	400-480	3,6	8	1100	372x116
FXE-M 1600/50	400-480	5,4	5	1600	564x116
FXE-M 400/50+	400-480	2,4	12	400	244x52
FXE-M 600/50+	400-480	3,6	8	600	372x52
FXE-M 1000/50+	400-480	6	5	1000	628x52
FXE-M 1000/80	400-480	4,8	6,4	1000	172x172
FXE-M 2500/80	400-480	10	2,8	2500	448x172
FXE-M 4000/80	400-480	16	1,6	4000	724x172
FXE-M 1600/100	400-480	12	2,4	1600	222x222
FXE-M 2400/100	400-480	16	1,6	2400	342x222
FXE-M 3200/100	400-480	2x12	2x2,4	3200	462x222
FXE-M 4800/100	400-480	2x16	2x1,6	4800	702x222
FXE-M 7200/100	400-480	3x16	3x1,6	7200	702x342

* Optionally available in 200-230 V protective earthing, IP 55

FXE-M modules are supplied with rear connections ready for use.
Optionally, we offer the following accessories:

Article	Article-Nr.
Eyelet 250kg	9 1061 0001
Eyelet 600 kg	9 1061 0002
Eyelet 1600 kg	9 1061 0003
Eyelet 3200 kg	9 1061 0004
hanging plate 7,2t	9 1061 0005
Spiral cable 3x2.5 1-5m	1013 5325
Spiral cable 3x2.5 0,5-2m	1013 5326
Spiral cable 4x4mm ² 1-5m	1013 626



FXE-MP Electropermanent magnetic system

The electro-permanent magnetic system FXE-MP works through a sandwich construction, giving the magnet a very compact structure. The FXE-MP Modules are particularly suitable for small loads. They can be connected through a MCF control unit. They are suitable for cranes, manipulators and robotic facilities.



Model	Arti-Nr.	Max. Load (kg)	Capacity from thickness (mm)	Dimens. (mm)			Pole structure	Breakaway (kN)	Weight (kg)
				L	B	H			
FXE-MP-75	1065 0075	75	12	80	80	80	2	2,5	3
FXE-MP-100	1065 0100	100	12	130	45	80	2	3,5	3
FXE-MP-100+	1065 0101	100	15	100	50	90	2	3,5	3
FXE-MP-300	1065 0300	300	20	210	70	110	2	10	9
FXE-MP-500	1065 0500	500	25	270	70	110	2	17	12

Workpiece temperature up to 100°C
 Optionally with pole shoes for Round material, Profiles, high temperature loads.
 Possibility of switching frequency >3/min, please request.



We provide the option to change the position of the power supply cable.

MCF Control Unit

The MCF Control Unit is designed to operate electro-permanent magnet modules. The MCF unit can be installed as a single card in the existing electrical cabinets, or with a dedicated IP54 electrical panel solution.

Other e-perm magnetic components, except the FXE Lifting Magnets Modules, can be driven with the MCF. This includes clamping plates or clamping blocks, construction in simple systems, (Alnico) as well as in construction with a double system (Alnico/ND).

Power and communication parameters of the MCF can be custom set; the modules can be controlled individually or in a group, with partial and full magnetization.

Signal outputs provide feedback on the module's status ensuring high safety standards. Each cycle an on-board control system checks that the current absorption of the magnetic module is correct.

The MCF control can be activated by machine, hand switch or wireless remote control.



Model	Article-Nr.	LxBxH (mm)	Weight (kg)
MCF PCB without power unit to Pole reversal device	9050 1310	200x120x60	0,4
MCF Power unit	9050 1311	120x50x50	0,2
MCF 1-Channel Pole reversal device	9050 1312-1	300x200x120	6,5
MCF 2-Channel Pole reversal device	9050 1312-2	400x200x120	8,5
MCF 3-Channel Pole reversal device	9050 1312-3	400x300x120	6,5
MCF 4-Channel Pole reversal device	9050 1312-4	400x300x120	12,5
Radio remote control	1013 6001	40x80x14	0,3
LED 360° Signal tower	1013 0026-1	Ø 50x280	1

FXE Electro-Permanent Lifting magnets

The battery magnetic lifters are as flexible as the permanent magnetic lifters while having the advantage of being activated from distance by remote control. All of our battery magnetic lifters are equipped with a remote control in high quality infrared rays and gel batteries. The FBM lifting magnets comply with the latest safety standard and are easy to use.

FBM Battery magnetic lifters

The FBM magnetic modules are primarily designed for the handling of flat material, the maximum flow performance can be achieved on plane surfaces and thickness from 30-50 mm.



Model	Arti-Nr.	Max. Load Capacity (kg)		Dimens. (mm)			Time for Charging 50% ED	Weight (kg)
		FLAT	ROUND	L	B	H		
FBM 13	1011 13	1350	-	272	242	460	8h	60
FMB 25	1011 25	2500	-	400	242	460	8h	72
FBM 36	1011 36	3600	-	1050	242	460	8h	180
FMB 50	1011 50	5000	-	1200	300	460	8h	203

Safety factor 2, based on an adequate Load (plane surface and right thickness!)
See load table on next page.

FBM-P Battery magnetic lifters

The FBM-P battery modules are primarily designed for round material, the maximum flow performance can be achieved on plane surfaces and thickness from 30-50 mm. The particular magnetic circuit allows an adequate hold even on medium-rough surfaces and in presence of air-gap.



Model	Art-Nr.	Max. Load Capacity (kg)		Dimens. (mm)			Time for Charging 50% ED	Weight (kg)
		FLAT	ROUND	L	B	H		
FBM-P 18	1012 18	1800	diam 25-300 mm 1130 kg	470	242	610	8h	167
FMB-P 36	1012 36	3600	diam 25-300 mm 2260 kg	760	262	620	8h	420

Safety factor 2, based on an adequate Load (plane surface and right thickness!)
See load table on next page.



Factors that ensure more safety:

- A sensor positioned in the lifting eyelet prevents the deactivation with suspended loads.
- Double activation button to prevent accidental inputs.
- Audible signal and flashing lights indicate low battery level.
- Inability of magnet activation with low battery.



FBM Load table for battery magentic lifters

Model	Load capacity for sheets (St37) as per roughness of surface							Hard rough surfaces Ari gap > 0,5mm
	Thickness (mm)	Flat or round surfaces Ari gap < 0,1mm		Low rough surfaces Ari gap 0,1< 0,3mm		Irregular surfaces Ari gap 0,3< 0,5mm		
		Dimension max L x B (mm)	Load (kg)	Dimension max L x B (mm)	Load (kg)	Dimension max L x B (mm)	Load (kg)	
FBM-13	38	2130 x 2130	1360	1900 x 1900	1160	1700 x 1700	900	Ask your reseller
	25	2130 x 2130	950	1830 x 1830	890	1830 x 1520	770	
	19	2130 x 2130	660	1830 x 1830	580	1830 x 1520	500	
	13	2130 x 2130	370	1830 x 1830	340	1520 x 1520	290	
	10	1830 x 1520	180	1520 x 1520	160	1520 x 1520	150	
	6	1220 x 1220	90	1220 x 1220	86	1220 x 1220	80	
FBM-25	50	2400 x 2400	2500	2400 x 2100	2100	2100 x 2100	1750	
	38	2400 x 2400	1850	2400 x 2100	1620	2100 x 2100	1350	
	25	2400 x 2400	1200	2400 x 2100	1130	2100 x 2100	950	
	19	2400 x 2400	800	2100 x 2100	700	2100 x 1800	610	
	13	1800 x 1800	370	1800 x 1800	360	1800 x 1800	330	
	10	1800 x 1500	250	1800 x 1500	200	1800 x 1500	180	
FBM-36	6	1500 x 1200	110	1500 x 1200	100	1500 x 1200	90	
	25	6000 x 3000	3600	6000 x 2700	3270	4300 x 3000	2730	
	19	6600 x 2400	2430	6000 x 2400	2230	4500 x 2400	1960	
	13	5100 x 2400	1250	4800 x 2400	1180	4500 x 2400	1090	
	10	3900 x 2400	720	3600 x 2400	660	3300 x 2400	610	
	6	3600 x 1800	340	3300 x 1800	300	3300 x 1500	270	
FBM-50	3	2400 x 1800	110	2100 x 1800	100	1800 x 1800	90	
	50	3600 x 3300	5000	3300 x 3300	4200	3000 x 2700	3500	
	38	3300 x 3300	3700	3300 x 3300	3240	3000 x 2700	2700	
	25	3300 x 3300	2400	3300 x 3000	2260	3000 x 2700	1900	
	19	3000 x 2700	1600	3000 x 2700	1400	2700 x 2700	1220	
	13	2700 x 2400	740	2700 x 2400	720	2400 x 2400	660	
FBM-P 18	10	2100 x 2100	500	2100 x 2100	400	2100 x 2100	360	
	6	1800 x 1800	220	1800 x 1800	200	1800 x 1800	180	
	50	2000 x 2000	1800	1700 x 1500	1030	1500 x 1500	930	
	38	1900 x 1900	1130	1800 x 1500	930	1800 x 1500	850	
	25	2100 x 2100	1020	2100 x 1800	840	2100 x 1800	760	
	19	2400 x 2100	800	2100 x 1800	660	2100 x 1800	590	
FBM-P 36	13	2400 x 2100	570	2100 x 2100	470	2100 x 1800	420	
	10	2100 x 2100	390	2100 x 1800	310	2100 x 1500	270	
	6	2000 x 2000	250	2000 x 1500	200	1800 x 1500	150	
	70	-	3600	-	3400	-	3200	
	40	2700 x 2700	2275	2400 x 2400	2440	2400 x 2100	2320	
	30	3000 x 3000	1730	2700 x 2700	1570	2700 x 2400	1420	
FBM-P 36	20	3000 x 3000	1250	2700 x 2700	1140	2700 x 2400	1050	
	15	3000 x 3000	920	2700 x 2700	840	2700 x 2400	780	
	10	2700 x 2700	610	2700 x 2400	580	2400 x 2400	520	
	6	3000 x 2700	370	2700 x 2400	350	2700 x 2400	320	

Model	Load capacity for I profiles, pipes, slabs (St37)								
	I profiles			Round profiles an slabs			Pipes		
	Thickness (mm)	Max lenght (mm)	Load (kg)	Diam (mm)	Max lenght (mm)	Load(kg)	Diam (mm)	Max lenght (mm)	Load(kg)
FBM-13	25	6000	840	25 - 300	6000	1130	25 - 300	6000	1130
	20	6000	680	150 - 300	6000	1130			
	10	6000	310						
	6	6000	200						
FBM-25	25	6000	1500	25 - 150	6000	2260	25 - 300	6000	2260
	20	6000	1250	150 - 300	6000	2260			
	10	6000	600						
	6	6000	370						

FX Lifting magnets Air Gap Tables

FX Force / Load / Air Gap

FX 150		Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	
>= 2	20	800	800	12	800	800	10	800	800	
>= 4	60	1500	1500	40	1500	1250	30	1200	800	
>= 6	80	1500	1500	60	1500	1250	50	1200	800	
>= 8	150	1500	1500	120	1500	1250	80	1200	800	
Ø50-200	75	1500	2000	50	2000	-	40	1500	-	

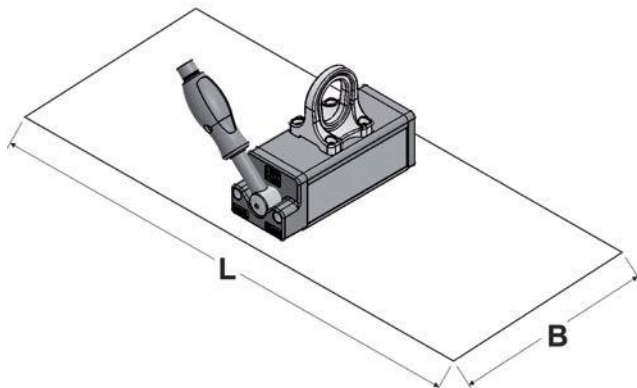
FX 300		Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	
>= 4	60	1600	1000	50	1500	1000	40	1250	1000	
>= 8	200	2000	1250	160	2000	1250	120	1500	1000	
>= 10	230	2250	1250	190	2000	1250	150	1500	1000	
>= 15	300	2500	1250	250	2000	1250	200	1500	1000	
Ø50-300	150	3000	-	125	2500	-	100	2000	-	

FX 600		Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	
>= 6	150	1800	1500	120	1800	1250	100	1500	1250	
>= 10	300	2250	1500	250	2250	1250	210	2000	1250	
>= 15	500	2500	1500	440	2500	1250	350	2000	1250	
>= 20	600	3000	1500	520	3000	1250	440	2500	1250	
Ø80-400	300	4000	-	250	3500	-	200	3000	-	

FX 1000		Air Gap < 0,3mm			Air Gap 0,3 - 0,5 mm			Air Gap 0,5 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	
>= 10	350	2250	1500	300	2250	1500	260	2250	1250	
>= 15	600	2500	1500	500	2500	1500	450	2500	1250	
>= 20	900	3000	1500	750	3000	1500	675	3000	1250	
>= 25	1000	3500	1500	850	3000	1500	750	3000	1250	
Ø100-450	500	4500	-	400	4000	-	330	3000	-	

FX 2000		Air Gap < 0,3mm			Air Gap 0,3 - 0,6 mm			Air Gap 0,6 - 0,8 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	
>= 15	500	2500	2000	400	3000	2000	330	2500	1500	
>= 25	1200	3000	2000	950	3000	2000	800	3000	1500	
>= 40	1600	2500	2000	1300	3000	2000	1100	3000	1500	
>= 50	2000	4000	2000	1600	3000	2000	1300	3000	1500	
Ø120-600	1000	4500	-	800	4000	-	650	3500	-	

FX 3000		Air Gap < 0,3mm			Air Gap 0,3 - 0,6 mm			Air Gap 0,6 - 0,8 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	
>= 15	750	2500	2500	600	3000	2500	500	2500	2000	
>= 25	1800	3000	2500	1400	3000	2500	1200	3000	2000	
>= 40	2400	3500	2500	2000	3000	2500	1600	3000	2000	
>= 50	3000	4000	2500	2400	3000	2500	2000	3000	2000	
Ø120-600	1500	5000	-	1200	5000	-	1000	4000	-	



FX-R Force/ Load / Air Gap

FX-R100	Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 2	25	800	800	12	800	800	10	800	800
>= 4	50	1500	1500	40	1500	1250	30	1200	800
>= 6	70	1500	1500	60	1500	1250	45	1200	800
>= 8	100	1500	1500	75	1500	1250	60	1200	800
Ø25-150	100	2000	-	75	2000	-	60	1500	-

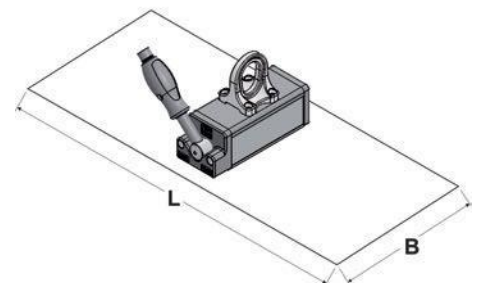
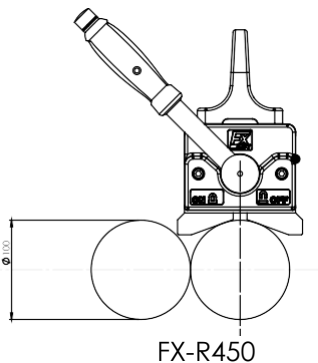
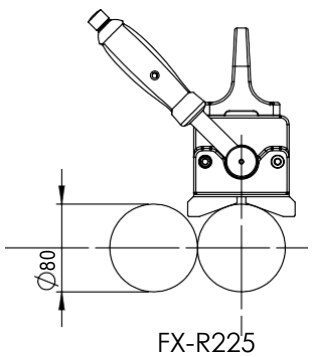
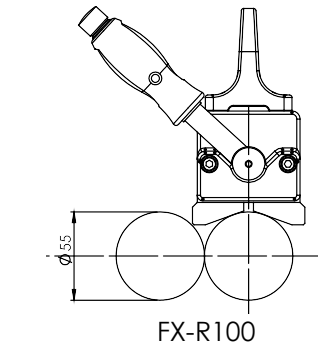
FX-R225	Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 4	80	1600	1000	60	1500	1000	40	1250	1000
>= 8	180	2000	1250	150	2000	1250	120	1500	1250
>= 10	225	2250	1250	200	2000	1250	150	1500	1250
Ø50-205	225	3000	-	200	2500	-	150	2000	-

FX-R450	Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 6	150	1800	1500	120	1800	1000	100	1500	1250
>= 10	300	2250	1500	250	2250	1250	210	2000	1250
>= 15	400	2500	1500	350	2500	1250	300	2000	1250
>= 20	450	3000	1500	400	3000	1250	350	2500	1250
Ø50-270	450	4000	-	375	3500	-	280	3000	-

FX-R750	Air Gap < 0,3mm			Air Gap 0,3 - 0,5 mm			Air Gap 0,5 - 0,6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 8	300	2250	1500	280	2250	1500	250	2250	1250
>= 10	400	2500	1500	380	2500	1500	300	2500	1250
>= 15	700	3000	1500	680	3000	1500	550	3000	1250
>= 20	750	3500	1500	720	3000	1500	600	3000	1250
Ø70-370	750	4500	-	600	4000	-	450	3000	-

FX-R1200	Air Gap < 0,3mm			Air Gap 0,3 - 0,6 mm			Air Gap 0,6 - 0,8 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 15	600	2500	2000	500	3000	2000	440	2500	1500
>= 20	800	3000	2000	650	3000	2000	550	3000	1500
>= 25	1000	3500	2000	800	3000	2000	700	3000	1500
>= 40	1200	4000	2000	1000	3000	2000	900	3000	1500
Ø120-560	1200	4500	-	900	4000	-	700	3500	-

FX-R1800	Air Gap < 0,3mm			Air Gap 0,3 - 0,6 mm			Air Gap 0,6 - 0,8 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 15	900	2500	2000	750	3000	2000	660	2500	1500
>= 20	1200	3000	2000	1000	3000	2000	825	3000	1500
>= 25	1500	3500	2000	1200	3000	2000	1050	3000	1500
>= 40	1800	4000	2000	1500	3000	2000	1200	3000	1500
Ø120-560	1800	5000	-	1500	4000	-	1125	3500	-

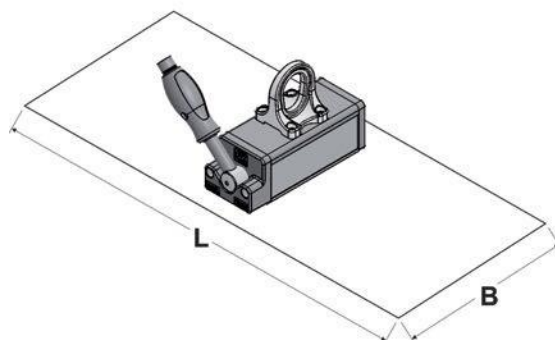
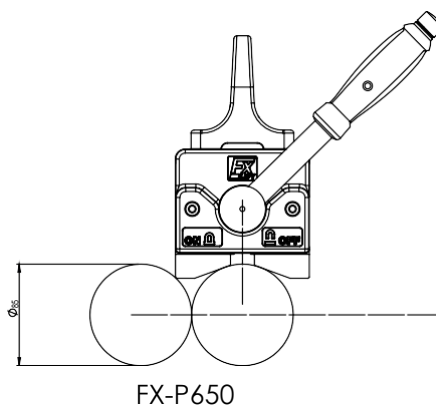
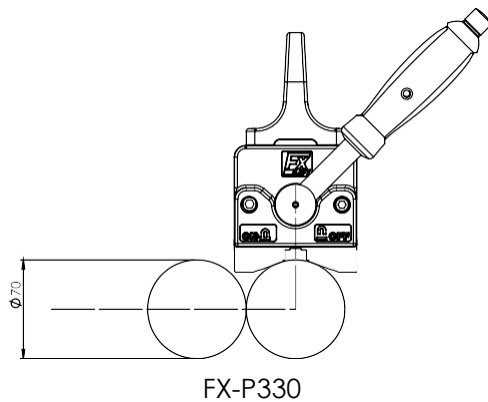
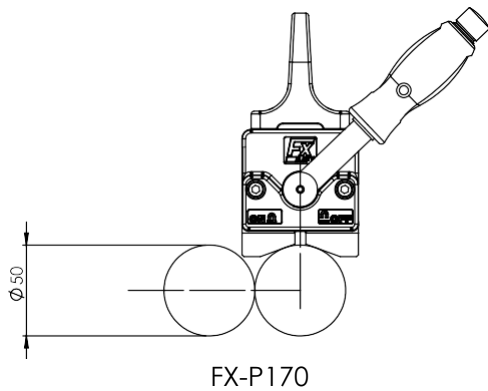


FX-P Force / Load / Air Gap

FX-P170	Air Gap < 0.3mm			Air Gap 0.3 - 0.6 mm			Air Gap 0.6 - 0.8 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 2	30	800	800	20	800	800	15	800	800
>= 4	80	1500	1500	60	1500	1250	50	1200	800
>= 6	120	1500	1500	90	1500	1250	75	1200	800
>= 8	170	1500	1500	130	1500	1250	100	1200	800
Ø30-105	150	2000	-	115	2000	-	60	1500	-

FX-P330	Air Gap < 0.2mm			Air Gap 0.2 - 0.3 mm			Air Gap 0.3 - 0.6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 4	100	2000	1000	80	1500	1000	60	1250	1000
>= 6	160	2500	1250	130	2000	1250	100	1500	1000
>= 8	300	2500	1250	240	2000	1250	180	1500	1000
>= 10	330	2500	1250	370	2000	1250	200	1500	1000
Ø40-160	300	3500	-	250	3000	-	180	2500	-

FX-P650	Air Gap < 0.2mm			Air Gap 0.2 - 0.3 mm			Air Gap 0.3 - 0.6 mm		
Material thickness (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 4	160	2250	1500	130	2000	1500	110	2000	1500
>= 6	200	2500	1500	175	2250	1500	140	2250	1500
>= 8	450	3000	1500	400	3000	1500	320	2500	1500
>= 10	550	2500	1500	500	3000	1500	400	2500	1500
>= 20	650	3000	1500	570	3000	1500	450	2500	1500
Ø60-210	550	4000	-	480	3500	-	400	3000	-

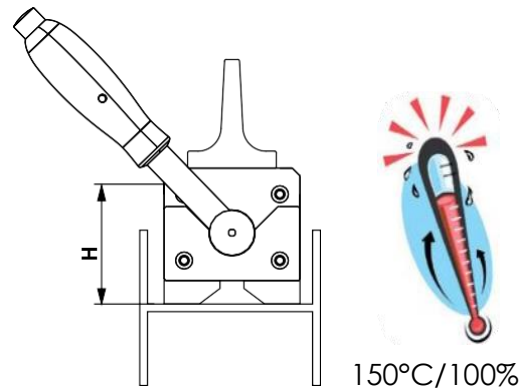
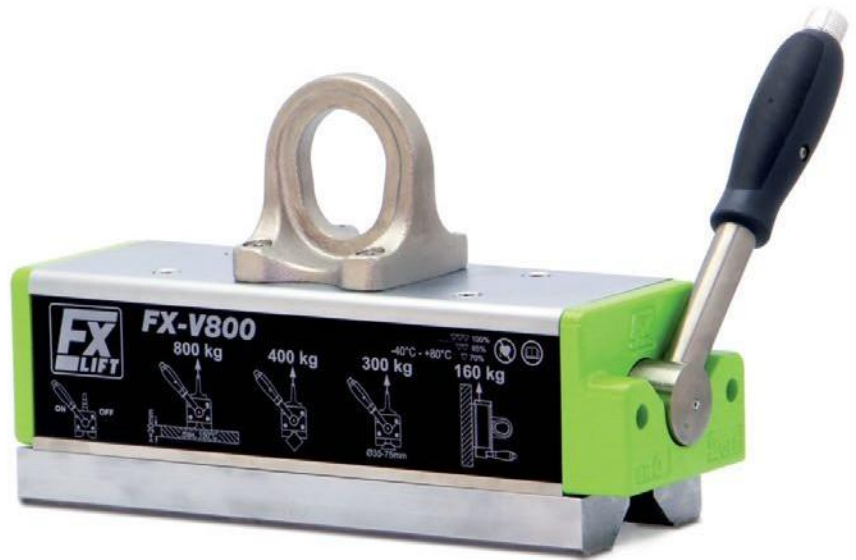
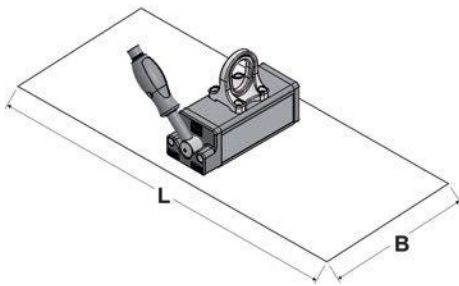


FX-V Force / Load / Air Gap

FX-V200	Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 4	70	1500	1000	50	1500	1000	35	1000	1000
>= 6	110	2000	1500	75	1500	1250	60	1250	1250
>= 8	175	2500	1500	120	2000	1250	90	2000	1250
>= 10	200	2500	1500	140	2000	1250	110	2000	1250
Ø20-50	100	2000	-	70	2000	-	60	1500	-
90°	120	2000	-	90	2000	-	60	1500	-

FX-V400	Air Gap < 0,2mm			Air Gap 0,2 - 0,3 mm			Air Gap 0,3 - 0,6 mm		
	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 6	150	2000	1000	110	1500	1000	75	1250	1000
>= 8	280	2500	1250	210	2250	1250	150	2000	1250
>= 10	350	2500	1250	260	2250	1250	180	2000	1250
>= 15	400	2500	1250	290	2250	1250	220	2000	1250
Ø70-370	200	3500	-	160	2250	-	120	2500	-
90°	250	3500	-	190	3000	-	130	2500	-

FX-V800	Air Gap < 0,1mm			Air Gap 0,1 - 0,3 mm			Air Gap 0,3 - 0,5 mm		
	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)	Max. Load (kg)	Max. L (mm)	Max. B (mm)
>= 4	130	2000	1500	100	2000	1500	90	2000	1500
>= 6	200	2500	1500	160	2250	1500	130	2250	1500
>= 8	400	3000	1500	320	3000	1500	270	2500	1500
>= 15	650	3000	1500	520	3000	1500	420	2500	1500
>= 20	800	3000	1500	650	3000	1500	550	2500	1500
Ø35-75	300	4000	-	240	3500	-	200	3000	-
90°	400	4000	-	320	3500	-	300	3000	-



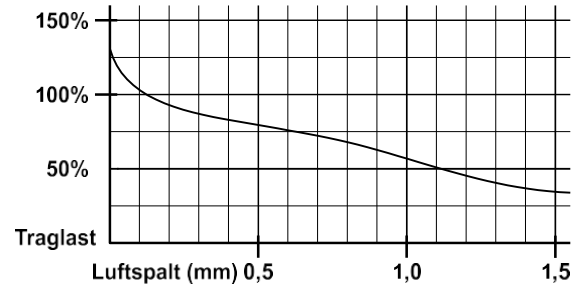
FX-V	H2 (mm)	IPE	HEB
FX-V 200	65	from IPE 80	from HEB 100
FX-V 400	87	from IPE 100	from HEB 120
FX-V 800	106	from IPE 140	from HEB 160

Factors affecting the Holding power of Lifting magnets

When choosing the right lifting magnet model, there are five other factors to consider that affect the lifting force, related to the weight of the load:.

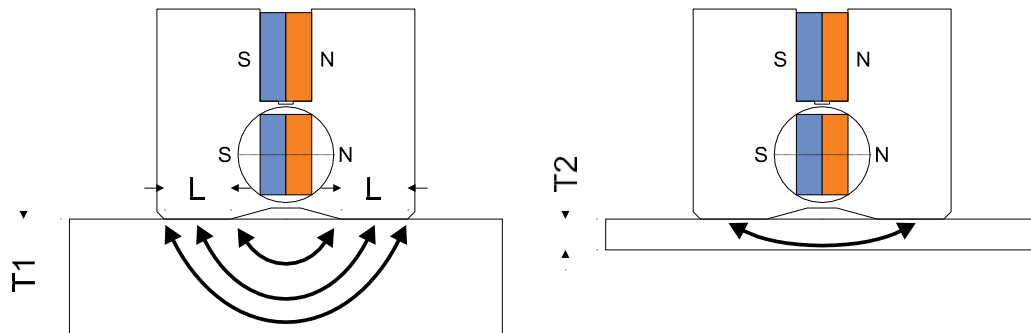
1. The contact surface

If space (air gap) exists between the lifting magnet and the load to be lifted, the magnetic flux is more difficult and thus reduces the lifting capacity. Rust, paint, dirt, paper or rough machined surface can create such an air gap and result in a reduction of the lifting force.



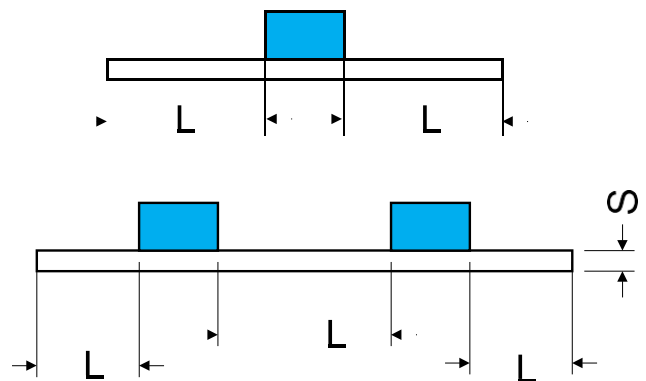
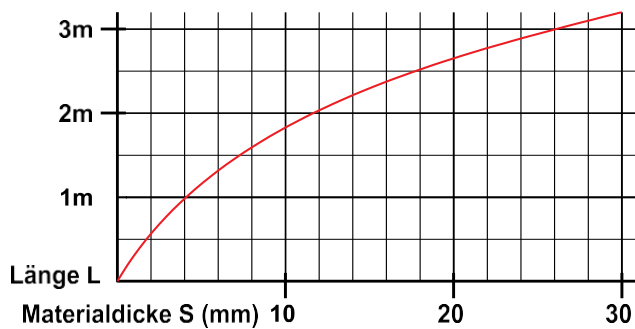
2. Material thickness

The magnetic flux of the lifting magnets requires a minimum material thickness. If the workpiece does not reach this minimum thickness, the lifting force is smaller. For larger lifting, greater material thicknesses are required.



3. Workpiece dimensions / intrinsic stability

If the length or width of the load is larger, the workpiece sags and is formed between the lifting magnet and the load - especially with thin material or with an air gap. This reduces the lifting force of the magnets.



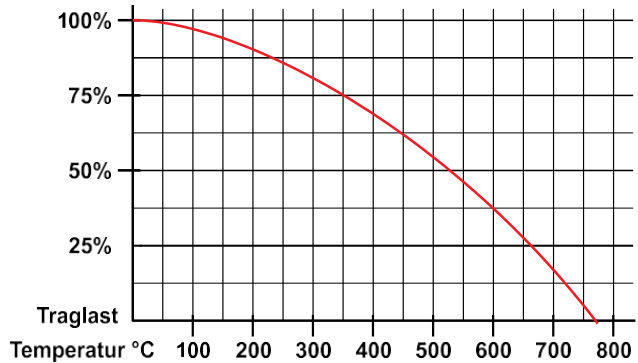
4. Composition of the Load to be lifted

Steel with low carbon content is a good magnetic conductor (i.e. F1110 or St37). Steel alloy with a high carbon content or with other materials, loses its magnetic properties, lowering the power of the lifting magnets. Heat treatments, which affect the steel structure, also reduce the lifting power. The harder a steel, the less its response to magnets, and it tends to retain a residual magnetism. The nominal power of our lifting magnets is valid for a steel with low carbon content, such as C 40 / St37.

Material	Lifting Power (%)
Carbon Steel 0,1 - 0,3 % C ST37/52	100
Carbon Steel 0,4 - 0,5 % C	90
Alloy Steel 2312/2379...	80 - 90
Cast Iron GGG	70 - 80
Cast Iron GG	45 - 60
Alloy Steel hardened at 55-60 HRc	40 - 50
Stainless Steel	0
Brass, Aluminum, Copper	0

Factors affecting the Holding power of Lifting magnets

5. Temperature of the Load to be lifted
 The higher the temperature, the faster the molecules vibrate the steel. Quickly vibrating molecules provide the magnetic flux and higher resistance. Our data apply to max. 80 °C.
 In almost the same way, the factors making 1, 2, 4, 5 are also noticeable in magnetic clamping.



Examination of Lifting magnets

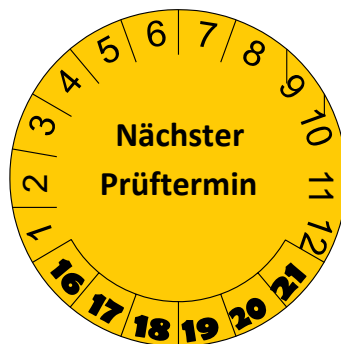
New Lifting Magnets are delivered by us with a manufacturer's declaration of conformity, which confirms compliance with the standards MD 2006/42 EC and EN 13155.

An exceptional inspection will be carried out for repair or extraordinary incidents (crash, collision) DGUV/BGR 500/Chapter 2.8.

A regular inspection will be conducted at least annually according to DGUV/BGR 500/Section 2.8.

Depending on the conditions of the received load, inspections at shorter intervals may be necessary.

We will gladly check your lifting magnets at our factory or at your site.





MAGNETIC SOLUTION PERMANENT ATTRACTION

VEGA  **TECHNIK**

Centro Magnético

Distribuidor Autorizado

Av. Cruz del Sur #3369-A,
Zapopan, Jalisco, México
CP. 45085

tel. +52(33) 361-9553

ventas@centromagnetico.com

www.centromagnetico.com/magnetic-lifter



Centro
Magnético