

BRISC PERMANENT LIFTING MAGNETS



The Ultimate Safer Lifting



3.5

times
breakaway force

Airgap? Thickness?
Load weight?
Material?

SAFE???

Would you like to know for sure the magnet you have chosen to handle a load will be safe BEFORE you use it? Then SAFER is for you.

You may know this lifter has breakaway force 3.5 times the rated load when the load is within the weight parameters of the lifter, is mild steel, is thick enough and flat enough, but what is the real break away force ON YOUR PART ? HOW do you use a simple tool in a SAFER manner?

Knowing you have a minimum 2 times safety factor every time you lift a load is a SAFER way to work.

Test Lift



Now we have the solution for the safest way to lift a load with a magnet. Thanks to our innovative test lift technology you can run a test lift at 50% of the magnet's power to provide real world proof the magnet can do what you need it to. Move parts safely in your shop.



Handle locked in "1/2" position

The patented technology insures a minimum 2 times safety factor against all potential load variations. At BRISC, we take a SAFER path to success. If you CAN lift the load at 50% power, then you will know you CAN move the load in a SAFER manner at full power with a minimum 2 times safety factor.



Handle locked in "full power" position

Full Power Lift

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Safety and simplicity up front

The best expression of power

Through a qualitative selection process of top grade high energy magnets and high dimensional tolerances between the stator and rotor we have achieved a 20% higher rated force in the same package with all sized magnets. Therefore it can reach maximum 3.5 times breakaway force.

Greater flexibility with thin gage loads

SAFER series magnets have been designed to meet the demand for handling thin loads in a safe and efficient way.

The special design of the polar area together with a properly balanced magnetic field allows a lower flux depth. The properly balanced magnetic field allows for easier handle operation on thinner plates.

A revolutionary design

The SAFER series lifting magnet is an innovative design as a result of many successful lifting systems from BRISC. In the development of application specific solutions in the permanent magnet lifting field.

Concentrated power

The Key elements for high power are the

complete isolation of the north and

south poles through the stator and rotor. This forces all potential magnetic lines of force through the part. This technology has no lines of force being transferred through the frame before reaching the part. This insures the customer gets all the power they paid for, where they need it, when they need for years to come. This design allows for the highest power to weight ratio in the industry.

SAFER is the safest way to work

Using the 1/2 power setting on the lifter and doing a test lift, you can be sure that at full power you have at least a 2 times safety factor.

Also, the high energy developed due to the innovative design which isolates the north and south poles completely before reaching the load, allows the operator to have feedback from the lifter itself as it is turned on. If the surface area is less than ideal, the handle will be harder to turn. The better the contact surface, the easier the handle is to turn. This "feedback" will help the operator to understand if in fact the surface contact is better in one area than another on each part they handle. This results in a potentially safer situation overall.



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Exclusive and safest technology

Reliability

The on and off cycle is performed by simply turning a lever. The high tolerance bearing surface in the lifter is designed for years of service.

Permanently safe power

High energy permanent magnets ensure great force and with good design we achieve concentrated power indefinitely. The 3.5 times breakaway force allows safe working conditions even with substantial air gaps.

Durable and compact

The incredible power to weight ratio is provided by the specific isolation design and high tolerance parts. Product innovation, material selection and state of the art manufacturing processes have created a powerful product with no maintenance requirements and convenient pricing resulting in great international success making SAFER the best selling close proximity lifter on the market.



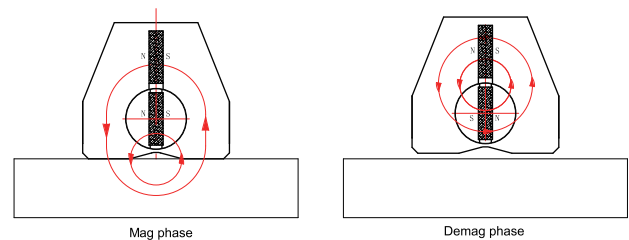
Always safety first

Safety first with the spring loaded safety handle design which prevents accidental de-mag.

High power Neodymium magnets and the Isolated magnetic circuit design ensure a high power to weight ratio and 3.5 times breakaway force. With the maintenance free design, nickel plated steel parts the SAFER lifter will provide a long lasting trouble free operational life. Advanced machining processes with stringent testing requirements ensures each SAFER lifter has the same strength and overall quality.

The Isolation design allows for the highest power to weight ratio on the market. With a well established and constantly improving manufacturing processes costs are kept in line allowing the highest power magnet to be produced in a uniform manner.

Sophisticated electronic inspection and testing instruments are used to assure the highest quality of permanent magnets are used. Each lifter is tested individually using mechanical and electronic means to certify all international performance parameters are met.



In the Mag and Demag phase, the rotor is turned approximately 160 degrees causing the magnetic flux path to move into the load, or out of the load.

The load is held in place by the constant force of the permanent magnetic materials in the isolated magnetic circuit design of the lifter.

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The patented 1/2 power test lift

Easy to use

A single operator can handle the load which, when SAFER 1/2 power test lift is performed, a minimum 2 times safety factor is guaranteed regardless of load characteristics. This ensures the load is lifted in a safe manner, without deformation or damage that can be caused by mechanical rigging, improving the overall productivity of the plant and equipment.

Test lifting procedures



1

Pull out the handle from "OFF" position



2

Turn the handle to "ON" position and make sure that the handle is in locked position



3

Pull out the pin from restore position



4

Put the pin into "1/2" position



5

Turn the handle to "1/2" position



6

Make a test load and set the load down and make sure that the load is securely rested

Full power lifting procedures



7

Turn the handle to "ON" position for lifting operation and make sure that handle is in locked position



8

Now the lifting magnet is in full power position and operator can start to lift the load



9

Set the load down and make sure that the load is securely rested



10

Pull out the pin from "1/2" position Only do this and following steps when the load is securely rested



11

Put the pin into restore position



12

Pull out the handle from "ON" position



13

Turn the handle to "OFF" position



14

Handle in locked position and should be securely fixed

All magnetic performances are directly related to the actual size and shape of the load to be handled. In addition, air gaps, temperature, metallurgical composition and thickness of the load all play key roles in the performance of a specific magnet.

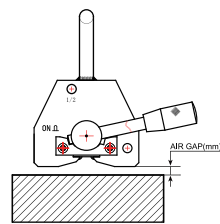
Thickness vs Power

The higher the force created by the magnet, the larger the polar area and in turn the deeper the magnetic field and thus the thicker the load needs to be to absorb 100% of the flux.

Material VS Power

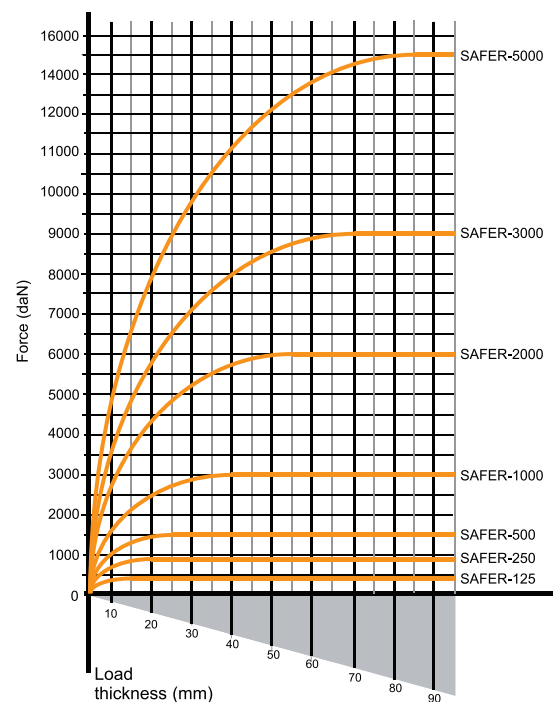
The higher the alloy, the less magnetic the object, the force is not generated by the magnet itself, it is generated by the ferrous materials in the flux path only.

The performance with irregular shaped loads that create a High air gap makes the Isolated magnetic circuit design shine above all other lifters with the same weight and size. With the isolated flux path design, the largest air gaps can be overcome relative to the quantity of magnetic materials in the lifter.

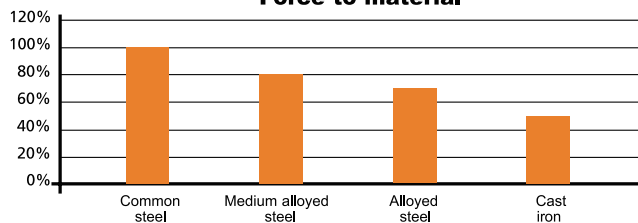


Pull / Air gap curves on common Fe 370B with steel poles completely covered

Force to thickness



Force to material



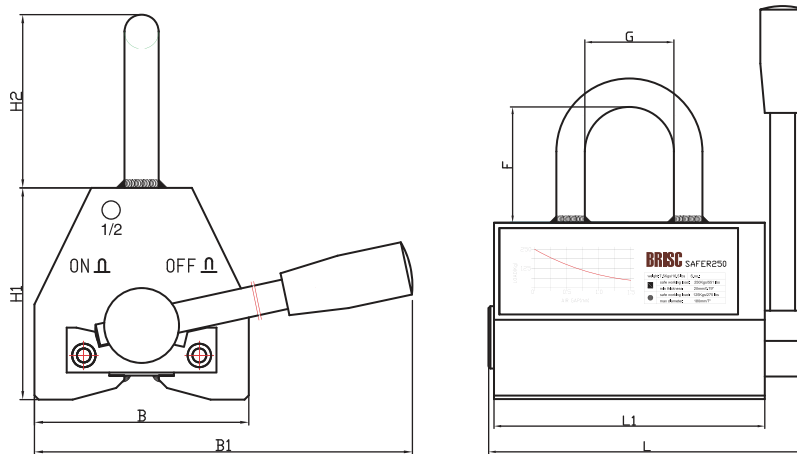
Specifications

Use:

for lifting ferromagnetic material with patented test position for safer lifting

Features:

- compact and light
- maximum 3.5 times breakaway force
- suitable for flat and round material
- maintenance free design
- safety device prevent accidental deactivation
- can be switched off by one hand only



Model	Size	Safe Working Load	B	B1	L	L1	H1	H2	F	G	Net Weight
SAFER	125	125 kg/275 lb	60 (2.36)	162 (6.38)	114 (4.49)	93 (3.66)	69 (2.72)	50 (1.97)	40 (1.57)	30 (1.18)	4 kg/8.8 lb
SAFER	250	250 kg/550 lb	100 (3.94)	230 (9.06)	178 (7)	152 (5.98)	99 (3.9)	81 (3.19)	65 (2.56)	50 (1.97)	8 kg/17.6 lb
SAFER	500	500 kg/1100 lb	120 (4.72)	230 (9.06)	273 (10.75)	256 (10.08)	99 (3.9)	81 (3.19)	65 (2.56)	50 (1.97)	19 kg/41.8 lb
SAFER	1000	1000 kg/2200 lb	146 (5.75)	315 (12.4)	334 (13.15)	316 (12.44)	125 (4.92)	112 (4.41)	92 (3.62)	64 (2.52)	40 kg/88 lb
SAFER	2000	2000 kg/4400 lb	165 (6.5)	510 (20.08)	516 (20.31)	484 (19.06)	165 (6.5)	112 (4.41)	92 (3.62)	64 (2.52)	85 kg/187 lb
SAFER	3000	3000 kg/6600 lb	200 (7.87)	610 (24.02)	596 (23.46)	550 (21.65)	217 (8.54)	125 (4.92)	100 (3.94)	70 (2.76)	150 kg/330 lb
SAFER	5000	5000 kg/11000 lb	290 (11.42)	930 (36.61)	699 (27.52)	657 (25.87)	299 (11.77)	160 (6.3)	130 (5.12)	100 (3.94)	370 kg/814 lb

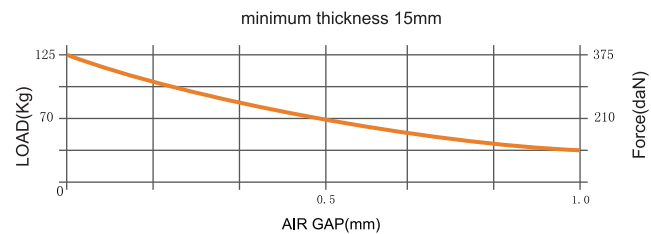
Model	Size	Load Plate Max	Plate Min Thickness	Plate Max Length	Load Round Max	Round Min Thickness	Round Max Diameter
SAFER	125	125 kg/275 lb	15 (0.59)	1000 (39.37)	50 kg/110 lb	10 (0.39)	150 (5.9)
SAFER	250	250 kg/550 lb	20 (0.79)	1500 (59.06)	100 kg/220 lb	10 (0.39)	180 (7.09)
SAFER	500	500 kg/1100 lb	25 (0.98)	2000 (78.74)	200 kg/440 lb	15 (0.59)	250 (9.84)
SAFER	1000	1000 kg/2200 lb	40 (1.57)	3000 (118.11)	400 kg/880 lb	25 (0.98)	280 (11.02)
SAFER	2000	2000 kg/4400 lb	55 (2.17)	3000 (118.11)	800 kg/1760 lb	35 (1.38)	350 (13.78)
SAFER	3000	3000 kg/6600 lb	70 (2.76)	3500 (137.8)	1200 kg/2640 lb	45 (1.77)	400 (15.75)
SAFER	5000	5000 kg/11000 lb	85 (3.35)	4000 (157.48)	2000 kg/4400 lb	55 (2.17)	450 (17.7)

Unit: mm(in)

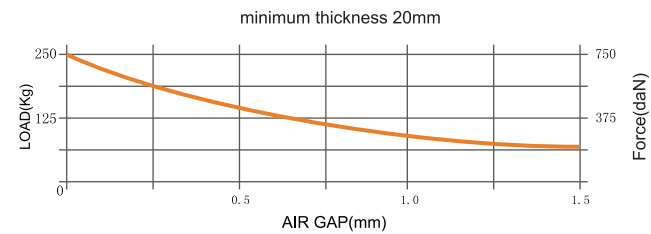
Functional parameters



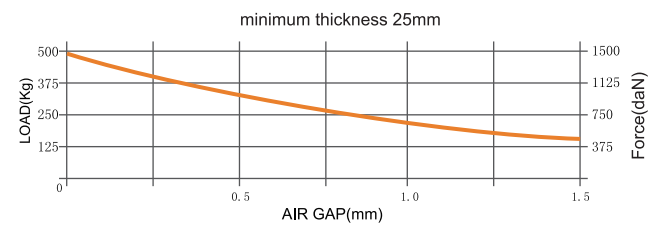
SAFER-125



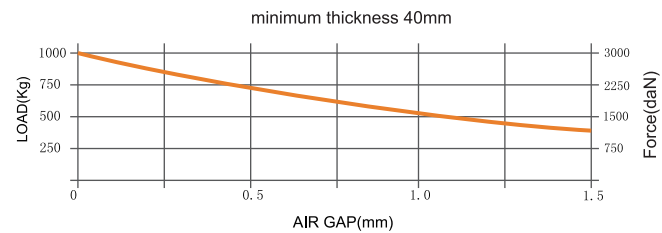
SAFER-250



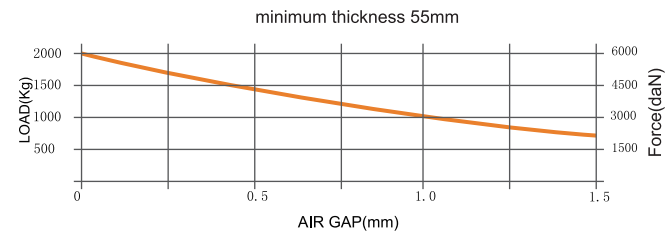
SAFER-500



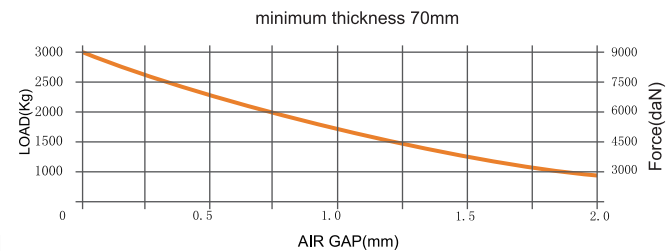
SAFER-1000



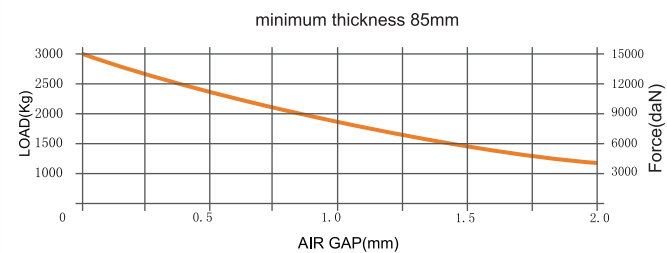
SAFER-2000



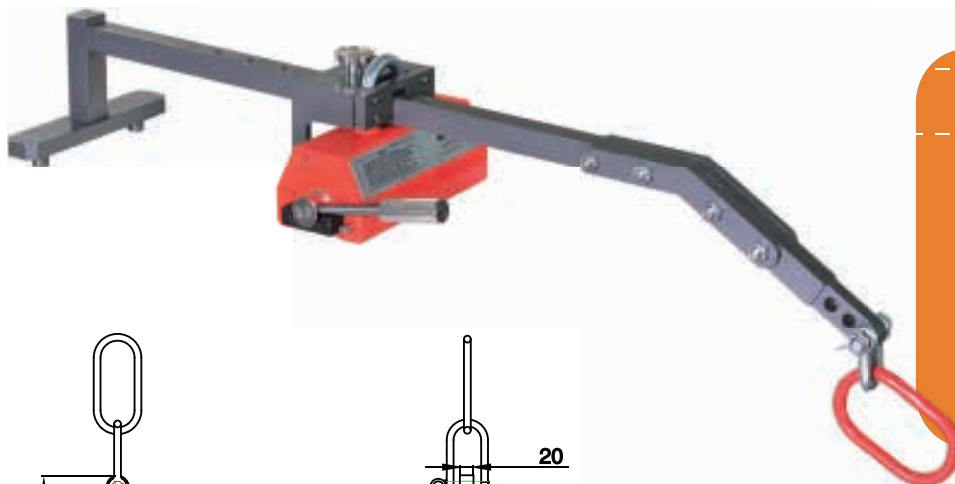
SAFER-3000



SAFER-5000

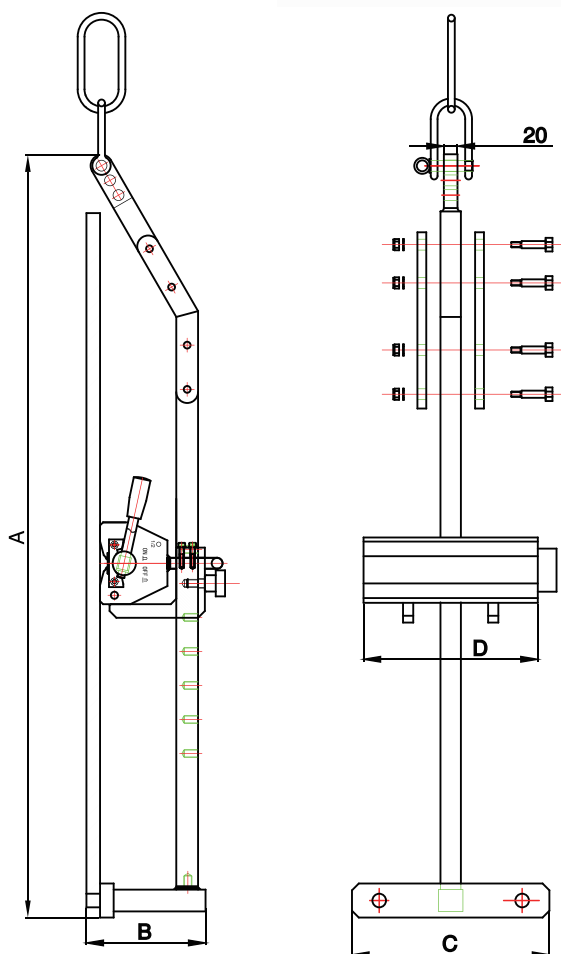


SAFER Vertical System PAR



PAR SAFER Vertical System

PAR system is designed for the vertical handling of steel blocks.
The typical application is loading / unloading a workpiece on a horizontal spindle milling machine. Can be used to flip parts over as needed in a safe manner using simple stalls is possible to fix the workpiece to the magnetic chuck from one side to other one, so as to work both faces.
PAR is easily adaptable to workpieces of different sizes, changing the position of locking pins.
PAR is available for SAFER 250/500.



Dimensions and Weights

With PAR	SAFER 250	SAFER 500
A (mm)	1121	1121
B (mm)	175	175
C (mm)	290	290
D (mm)	256	256
Weight (kg)	31	42

Technical Characteristics

With PAR	SAFER 250	SAFER 500
Load Max (kg)	250	500
Max length plate (mm)	800	1000
Min length plate (mm)	300	300
Min thickness plate (mm)	4	6
Max width plate (mm)	550	700



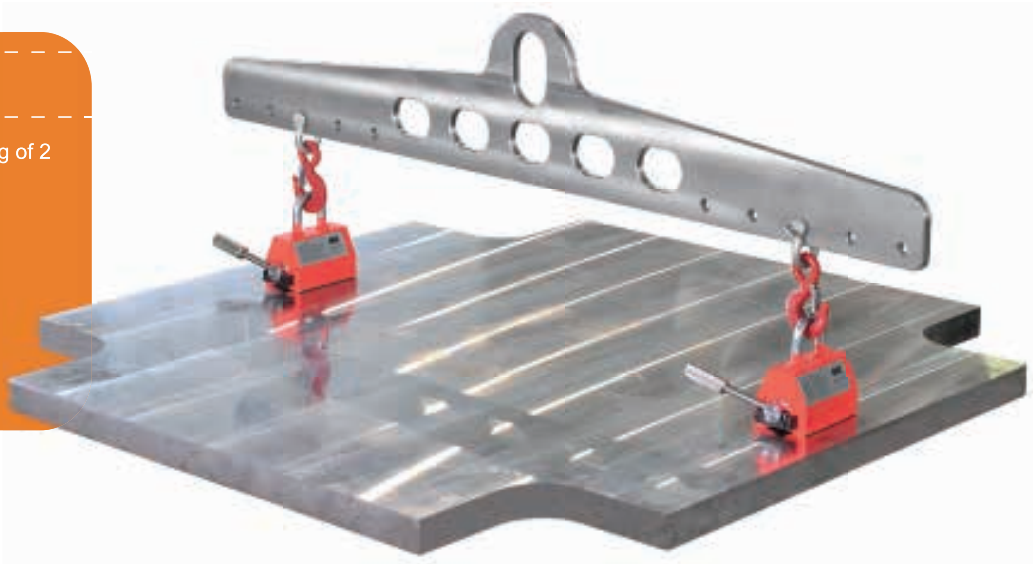
SOPH provides a line of accessories for SAFER lifters to increase overall flexibility during use of horizontal and vertical material handling applications. The durable design makes them reliable over time with no required maintenance.

SAFER Fixed Beam BLM

BLM
SAFER Fixed Beam

The BLM spreader beam allows for the mounting of 2 SAFER lifters increasing the load handling characteristics without complicating the overall simplicity of the process.

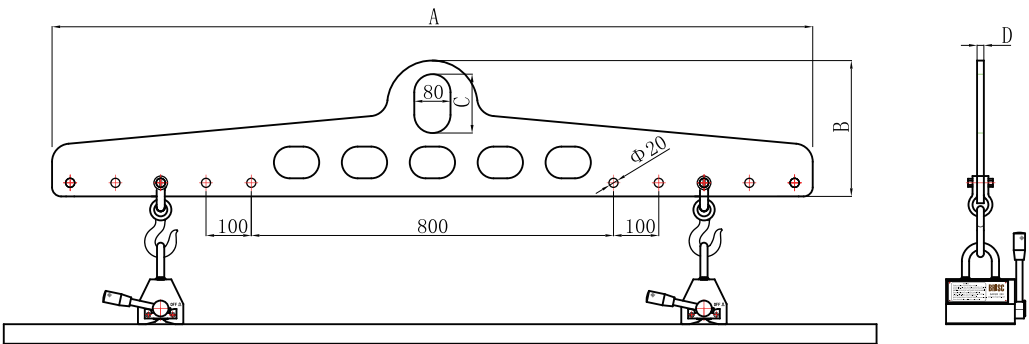
BLM-1 handles loads up to **800 kgs and 3000mm** while BLM-2 handles loads up to **1600kg and 3000mm** in length.



Dimensions and Weights(mm)

BLM-1	
A (mm)	1680
B (mm)	300
C (mm)	130
D (mm)	15
Weight (kg)	37

BLM-2	
A (mm)	1900
B (mm)	415
C (mm)	160
D (mm)	20
Weight (kg)	75



Technical Characteristics / load capacity

BLM-1

in combination with:	Plates			Rounds	
	Load	Max Length	Max Width	Load	Max Length
	(kg)	(mm)	(mm)	(kg)	(mm)
2 x SAFER-250	400	3000	1500	200	3000
2 x SAFER-500	800	3000	1500	400	3000

BLM-2

in combination with:	Plates			Rounds	
	Load	Max Length	Max Width	Load	Max Length
	(kg)	(mm)	(mm)	(kg)	(mm)
2 x SAFER-500	800	3000	1500	400	3000
2 x SAFER-1000	1600	3000	1500	750	3000

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Technical Changes

The data and illustrations in this catalogue are not binding and only provide an approximate description. We reserve the right to make changes to the product delivered compared with the data and illustrations in this catalogue, e.g. in respect of technical data, design, fittings, material and external appearance.

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