



MAGNETIC SYSTEMS

LIFTINGSAFETY

EN

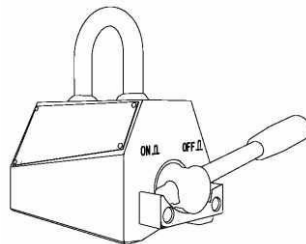
# Operation manual

**LIFT125,  
LIFT500,  
LIFT1500,**

**LIFT250  
LIFT1000  
LIFT2000**



# LIFTINGSAFETY MAGNETIC SYSTEMS



**PERMANENT  
LIFTING MAGNETS**

**Type LIFT125, LIFT250, LIFT500,  
LIFT1000, LIFT1500 and LIFT2000**



## OPERATING AND MAINTENANCE INSTRUCTIONS FOR MODELS LIFT125, LIFT250, LIFT500, LIFT1000, LIFT1500 AND LIFT2000

### FOREWORD

You have purchased a LiftingSafety lifting magnet.  
We thank you for the trust you have placed in our product.

These instructions contain all the information required for safe and optimum use of the lifting magnet.  
Read the instructions carefully and follow the directions.  
Keep the instructions in a safe place close to the workplace.

On delivery check that the magnet is undamaged and complete. If the equipment is damaged or incomplete contact your supplier immediately.

The complete delivery consists of:

- Magnet LIFT125, LIFT250, LIFT500, LIFT1000, LIFT1500 and LIFT2000
- Test certificate
- Operating and maintenance instructions LIFT125, LIFT250, LIFT500, LIFT1000, LIFT1500 and LIFT2000 incl. EC Declaration of Conformity

**Never use a damaged or incomplete magnet!**

The LIFT125, LIFT250, LIFT500, LIFT1000, LIFT1500 AND LIFT2000 are guaranteed for a term of 60 months.

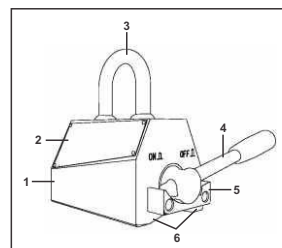
The guarantee is not applicable to shortcomings that can be wholly or partially attributed to:

- failure to comply with the operating and maintenance instructions or use considered as being other than normal.
- normal wear.
- modifications or repairs not performed by LiftingSafety or an authorised agent.

In all correspondence regarding your lifting magnet always state the information displayed on the type plate.

### NAMES OF THE MOST IMPORTANT PARTS OF THE LIFTING MAGNET

- 1 Magnet
- 2 Instruction plate + type plate
- 3 Lifting eye
- 4 Handle
- 5 Handle lock plate
- 6 Pole shoes



### TECHNICAL SPECIFICATIONS AND DIMENSIONS

	LIFT125	LIFT250	LIFT500	LIFT1000	LIFT1500	LIFT2000
Length (mm)	93	152	246	306	374	478
Width (mm)	60	100	120	146	165	165
Height (mm)	120	180	180	236	273	273
Height (mm) (incl. Lifting eye)						
Weight (kg)	2,6	10	19	38	67	85
Tested Lifting Capacity (daN)	400	800	1600	3200	4700	6200
Workload limit for plates (kg)	125	250	500	1000	1500	2000
Workload limit pipe and tube (kg)	50	125	250	500	750	1000
Ø min / max (mm)	50/100	60/200	65/270	100/300	150/350	150/350



**For vertical manipulation capacity cca 20% of nominal ONLY!  
DO THE TEST BEFORE VERTICAL MANIPULATION!**

## SAFETY

## Warning symbol



Warning for incorrect operation or action that could have physical injury or damage to the equipment as a result.

## Safety instructions

- 1 Never use this magnet before these instructions have been read and understood.
- 2 Persons fitted with a pacemaker or other medical equipment should never use the magnet without first consulting a medical specialist.
- 3 Never remove warning or instruction plates from the magnet.
- 4 Always wear safety glasses, gloves, protective footwear and a helmet.
- 5 Never stand or move under the load.
- 6 Never transport over or past people.
- 7 Never use the magnet as an aid to lifting, supporting or transporting persons.
- 8 Warn bystanders when beginning to lift and load.
- 9 To prevent the hook from slipping out of the eye hook always use a lifting hook equipped with a safety latch.
- 10 Ensure that the weight and dimensions of the load to be lifted do not exceed the maximum permitted values.
- 11 Never use a damaged or poorly operating magnet.
- 12 Only switch the magnet on when it has been placed on the load.
- 13 Only switch the magnet off when the load has been placed on a stable surface.
- 14 Never lift more than one workpiece at a time with this magnet.
- 15 Never leave a hoisted load unattended.
- 16 The temperature of the load or the surroundings must never exceed 80°C.
- 17 **HOT - The temperature of the load or the surroundings must never exceed 200°C.**



## DETERMINING THE WORKLOAD LIMIT (WLL)

The workload limit of type LIFT125 = 125 kg  
 The workload limit of type LIFT250 = 250 kg  
 The workload limit of type LIFT500 = 500 kg  
 The workload limit of type LIFT1000 = 1000 kg  
 The workload limit of type LIFT1500 = 1500 kg  
 The workload limit of type LIFT2000 = 2000 kg

The workload limit may become less as a result of:

- 1 Air gaps between the load and the magnet, caused by paper, dirt, paint, burrs, damage, surface roughness etc. either on the load or the magnet.
- 2 Thin loads. The thinner the load, the less the lifting capacity.
- 3 Length and width of the load. Long, wide parts that hang outside the magnet protrusions, resulting in an air gap. This is called the peeling effect.



Never exceed the maximum weight and/or dimensions for the material thickness stated in the table.



Never place the magnet over a large hole or bore.

- 4 The load material type. In general it applies that: high alloy percentage = low lifting capacity.  
Some alloys are even totally non-magnetic (e.g. stainless steel 304).



The values in the table on page 4 apply to St. 37 (S 235 JR). For other materials the lifting capacity will reduce by the percentages below:

Workload limit for various materials							
Material	%	LIFT125	LIFT250	LIFT500	LIFT1000	LIFT1500	LIFT2000
		(kg)	(kg)	(kg)	(kg)	(kg)	(kg)
St 37 (S 235 JR)	100	125	250	500	1000	1500	2000
E 295 (St 52)	96	120	240	480	960	1440	1920
Cast steel	90	112	225	450	900	1350	1800
Stainless steel 430 F	50	62	125	250	500	750	1000
Cast iron	45	56	112	225	450	675	900
Nickel	10	12	25	50	100	150	200

For other materials consult your supplier.

- 5 A small contact surface between pole shoes and load. In case the load does not fully cover the pole shoes the lifting capacity will be reduced by the same percentage.



A workpiece should cover both pole shoes as far as possible, and always to an equal amount.

- 6 The magnet must remain fully horizontal during transport.

## Unsafe applications



Never lift more workpieces simultaneously (e.g. thin sheets)



Never lift a load on the smallest side.

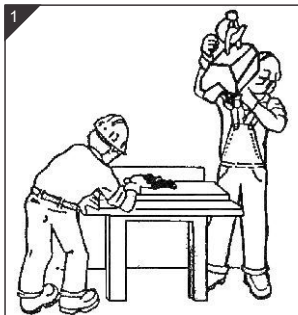


Never place the magnet with the long side lengthwise on a flexible workpiece (peeling effect).

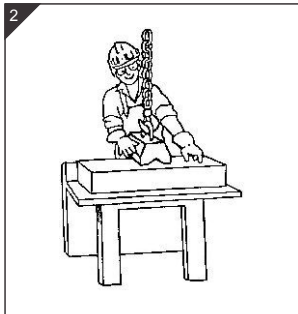
## OPERATION

Read the safety instructions first before operating the magnet

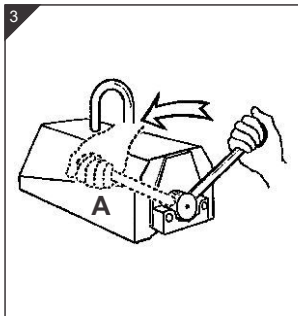
- 1 Check the condition of the magnet each time before use. Wipe the pole shoes on the magnet and the contact surface of the workpiece clean. If necessary file off any burrs or irregularities.



- 2 Place the magnet on the workpiece and position the magnet in such a manner that it remains horizontal during lifting (determine the centre of gravity of the workpiece as accurately as possible).

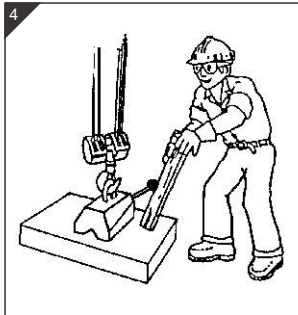


- 3 Grasp the handle and switch the magnet on by placing the handle in position A. Allow the spring pressure to pull the handle back into the locked position. Check this! Only now the handle can be released.

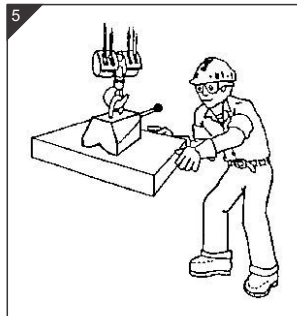


Never try to switch the magnet **ON** or **OFF** while it is sitting on very thin or on non-magnetic material or in the air.

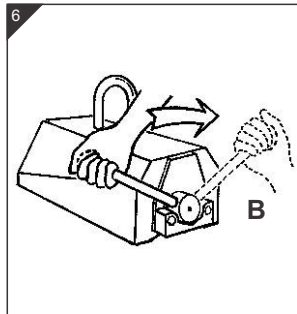
- 4 Lift the load several centimetres and give the load a firm push to ensure that it is well gripped. Never stand under the load!



- 5 Guide the load by holding the corners. Avoid collisions, swinging and shocks. Never stand under the load and keep the load horizontal!



- 6 Grasp the handle bal and pull the handle out of its locked position. Switch the magnet off by placing the handle in position B. Allow the spring pressure to pull the handle back into the locked position. Check this! Only now the handle can be released.



Caution: light workpieces may stick to the magnet after it has been switched off!



Never release the handle before same is fully locked.

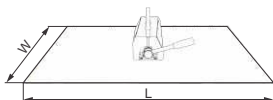
## INSPECTION AND MAINTENANCE OF THE LIFTING MAGNET

- *Before use:*  
Check the entire magnet visually. Brush the pole shoes of the magnet and the contact surface of the workpiece clean. If necessary file off any burrs or irregularities. Do not use the magnet if you have discovered any defects. Check the operation of the handle and locking plate.
- *Weekly:*  
Check the entire magnet, including the hook eye, lifting cover and bolts for deformities, cracks or other defects. If the lifting eye is deformed or more than 10% worn off, it should be replaced. Check the presence and legibility of the type plate and instruction plate. Check the pole shoes. If they are more than 10% damaged (pits, burrs etc.) the magnet should be returned to your supplier or an authorised agent for regrinding. Lifting capacity is checked following this operation.
- *Annually:*  
Have the lifting capacity of your magnet checked by your supplier or an authorised agent at least once a year.

## WORKLOAD LIMIT FOR PLATES AND ROUNDS (FOR S 235 JR [ST 37])

		Surface condition								
		Clean and smooth ground surface. Air gap < 0.1 mm		Rusty and hot rolled surface Air gap 0.1 - 0.3 mm		Irregular and rough surface. Air gap 0.3 - 0.5 mm				
		Max. dimensions L x W (mm)	WLL (kg) for plate sizes as below	Max. dimensions L x W (mm)	WLL (kg) for plate sizes as below	Max. dimensions L x W (mm)	WLL (kg) for plate sizes as below			
LIFT 125	25	-	L>200 W>200	L>60 W>100	-	L>200 W>200	L>60 W>100	-	L>200 W>200	L>60 W>100
	15	1900 x 500	115	100	1100 x 500	70	60	900 x 500	55	45
	10	2300 x 500	110	65	1500 x 500	65	50	1200 x 500	50	40
	4	2500 x 500	45	17	2300 x 500	40	17	1700 x 500	30	15
	2	1500 x 500	15	4	1300 x 500	13	3	1200 x 500	12	3
	Ø50 - Ø100	Lmax. 2500	40	Lmax. 1700	28	Lmax. 1500	24			
LIFT 250	30	-	L>300 W>300	L>100 W>145	-	L>300 W>300	L>100 W>145	-	L>300 W>300	L>100 W>145
	15	1750 x 1000	205	155	1250 x 1000	150	120	1000 x 800	90	85
	10	2200 x 1000	170	80	1650 x 1000	130	65	1100 x 1000	85	53
	6	2100 x 1000	100	34	1650 x 1000	80	28	1300 x 1000	60	23
	4	1600 x 1000	50	17	1400 x 1000	45	14	1150 x 1000	36	12
	Ø60 - Ø200	Lmax. 3500	125	Lmax. 3000	100	Lmax. 2500	70			
LIFT 500	40	-	L>400 W>400	L>110 W>240	-	L>400 W>400	L>110 W>240	-	L>400 W>400	L>110 W>240
	20	1800 x 1500	425	365	1650 x 1250	230	290	1400 x 1000	220	200
	15	2250 x 1500	400	235	2050 x 1250	300	195	1750 x 1000	205	150
	10	2500 x 1500	270	115	2350 x 1250	220	95	2150 x 1000	165	80
	8	2300 x 1500	195	80	2250 x 1250	160	65	2150 x 1000	125	55
	6	2000 x 1500	125	50	2000 x 1250	100	40	2000 x 1000	80	33
Ø65 - Ø270	Lmax. 4000	250	Lmax. 3500	200	Lmax. 3000	150				
LIFT 1000	60	-	L>500 W>500	L>145 W>310	-	L>500 W>500	L>145 W>310	-	L>500 W>500	L>145 W>310
	30	2450 x 1500	860	710	2000 x 1500	730	620	1900 x 1250	565	515
	25	2850 x 1500	830	535	2400 x 1500	705	475	2250 x 1250	550	410
	20	3200 x 1500	745	365	2750 x 1500	640	320	2600 x 1250	510	290
	15	3300 x 1500	500	215	2900 x 1500	445	195	2800 x 1250	380	175
	10	2750 x 1500	265	105	2550 x 1500	240	95	2650 x 1250	200	85
Ø100 - Ø300	Lmax. 4500	500	Lmax. 4000	400	Lmax. 3500	300				
LIFT 1500	80	-	L>800 W>800	L>170 W>400	-	L>800 W>800	L>170 W>400	-	L>800 W>800	L>170 W>400
	50	3000 x 1200	1460	1250	2500 x 1200	1200	1050	2000 x 1200	960	900
	30	3500 x 1200	980	430	3250 x 1200	900	390	2500 x 1300	780	350
	20	3500 x 1400	760	310	3000 x 1600	750	290	2500 x 1750	695	270
	15	3000 x 1500	540	195	3000 x 1500	530	180	2500 x 1400	420	160
	Ø150 - Ø350	Lmax. 5000	750	Lmax. 4500	700	Lmax. 3500	600			
LIFT 2000	80	-	L>800 W>800	L>170 W>500	-	L>800 W>800	L>170 W>500	-	L>800 W>800	L>170 W>500
	50	3250 x 1500	1850	1600	2500 x 1500	1600	1350	2000 x 1500	1250	1150
	30	3500 x 1500	1350	550	3250 x 1500	1150	500	2500 x 1500	1000	450
	20	3500 x 1500	1100	400	3000 x 2000	1000	375	2500 x 2000	900	350
	15	3000 x 1500	650	250	3000 x 1500	600	230	2000 x 1500	550	200
	Ø100 - Ø350	Lmax. 5000	1000	Lmax. 4500	900	Lmax. 4000	800			

L = Length (mm), W = Width (mm)



Do not lift plates thinner than indicated in the chart.

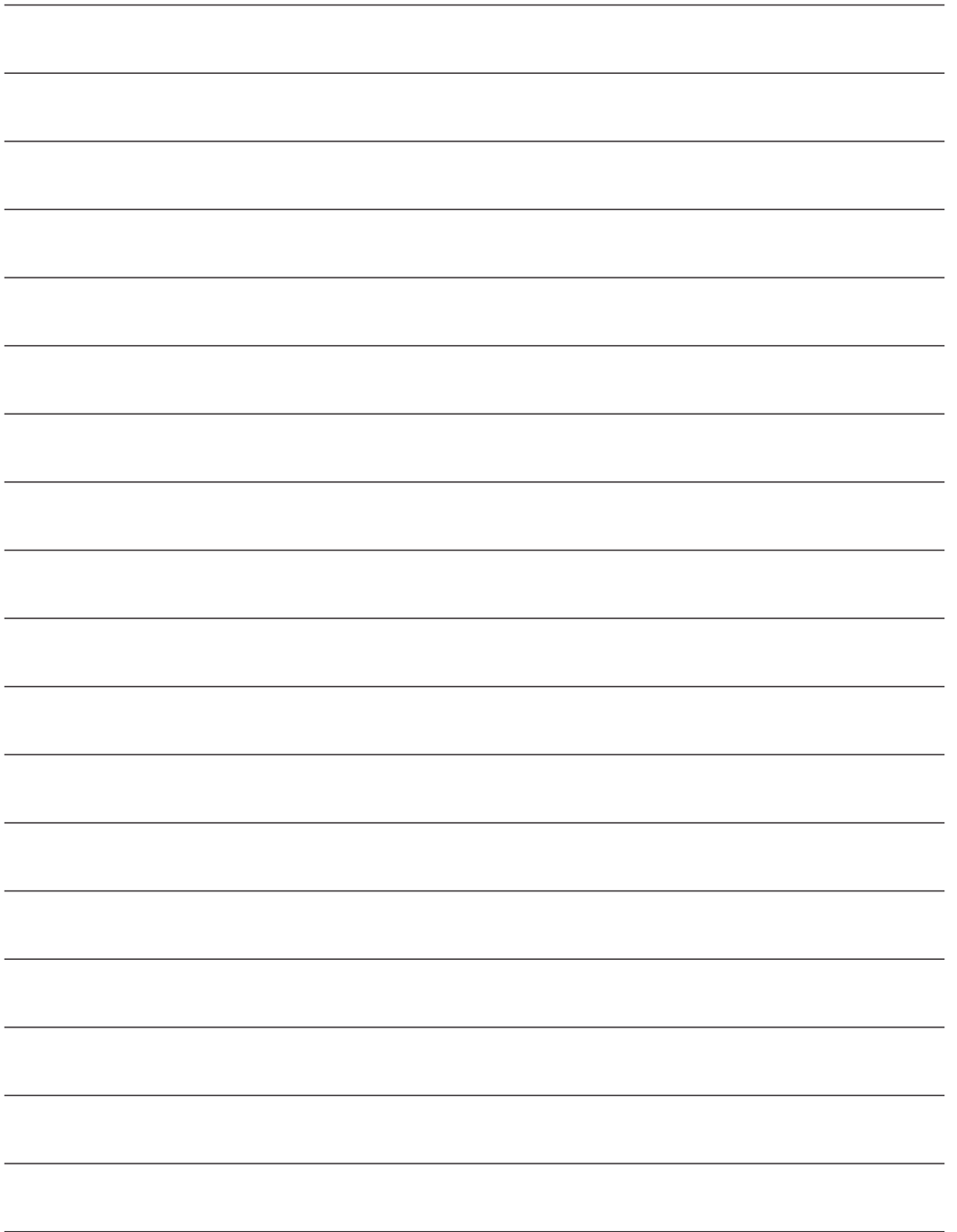


When lifting tubes with a thin wall the length may be the limiting factor.

**HORIZONTAL AND VERTICAL HANDLING?**

Use the HV" lift arm, very convenient to turn from horizontal to vertical position and viceversa. Ask further information!





http

<http://www.liftingsafety.co.uk>



# MAGNETIC SYSTEMS FOR MANIPULATION

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