

Yale TPM Magnetic Lifters User Manual

INTRODUCTION

All users must read these operating instructions carefully prior to the initial operation. These instructions are intended to acquaint the user with the product and enable him to use it to the full extent of its intended capabilities. The operating instructions contain important information on how to handle the product in a safe, correct and economic way. Acting in accordance with these instructions helps to avoid dangers, reduce repair cost and down time and to increase the reliability and lifetime of the product. Apart from the operating instructions and the accident prevention act valid for the respective country and area where the product is used, also the commonly accepted regulations for safe and professional work must be adhered to.

Ensure that the temperature of the load does not exceed 60° C, as metals with higher temperatures will lose their magnetic properties. In case of extreme conditions consult the manufacturer.

Always observe the details given on the name plate and in Fig. 3, 4, table 1, 2.

Always raise, lower and transport loads slowly and carefully.

If longer sheets of metal or profiles are to be transported, we recommend using two or more load hoisting tackles to prevent swing-

CORRECT OPERATION

- The load hoisting tackle has been designed for lifting, lowering and horizontal transport of steel sheet, flat and round steel.
- In addition the load hoisting tackle can be attached to all ferro-magnetic steel loads.
- The capacity indicated on the load hoisting tackle is the maximum safe working load (W.L.L.) that may be attached.
- Do not lift or transport loads while personnel are in the danger zone.
- Do not allow personnel to stay or pass under a suspended load.
- A load must not be suspended or left unattended for a longer period of time.
- The operator may not move the load until he is convinced that the load is correctly suspended.
- During positioning of the load hoisting tackle, the operator must ensure that neither the tackle, nor slings or load present a danger to himself or other personnel.
- The load hoisting tackle may be used at ambient temperatures between -10° and +60° C and a maximum humidity of 80%.

ing or deflection of the load. The tackles should be used in connection with a spreader beam.

- Make sure that the hook of the crane or hoist corresponds to shape and size of the suspension eye (Fig. 5) of the load hoisting tackle.
- The accident prevention act and safety regulations for load hoisting tackle valid in the country of operation are to be strictly adhered to at all times.
- If defects are found or malfunctions observed, stop using the load hoisting tackle immediately.

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INCORRECT OPERATION

- Do not exceed the rated lifting capacity (W.L.L.).
Attention: The references given in Fig. 3, 4 and table 1, 2 with regard to shape and material of the lifted product, should be strictly observed.
- Do not tamper with lifting tackle.
- Ensure that the load centre of gravity is located vertically below the suspension eye in order to avoid loosening or tilting of the load.
- Do not use the load hoisting tackle for transportation of people.
- Do not lift or transport loads while personnel are in the danger zone.
- When transporting loads, make sure that the load does not swing or come into contact with obstacles.
- Do not lift or transport more than one lifting object at a time.
- Do not magnetize the load hoisting tackle before it has been attached to the load.
- Do not demagnetize the load hoisting tackle unless the load has been fully lowered down and the safe ground contact has been controlled.
- Do not use the load hoisting tackle close to strong electro-magnetic fields.
- Do not use the load hoisting tackle close to medical units like e.g. cardiac pacemakers or insulin pumps, as the magnetic field could affect the function mode.
- Do not lift or transport a load unless the hand lever of the load hoisting tackle has been properly locked.
- Do not allow the load hoisting tackle to fall from a great height.

INSPECTION BEFORE INITIAL OPERATION

A competent person must inspect each load hoisting tackle prior to initial operation. This inspection is visual and functional and shall establish that the tackle is in a safe condition

resp. that any defects found can be corrected before operation commences. A service engineer, a representative of the manufacturer or the supplier, can make the inspection, although the company can assign its own suitably trained personnel.

INSPECTION BEFORE STARTING WORK

- Prior to operation, the hand lever (Fig. 5), which can be removed for transport purposes, has to be screwed to the load hoisting tackle.
- Ensure that the load surface, where the hoisting tackle is to be attached, is free from grease, paint or other coatings, dirt, scale and ice and even so that the contact between load and pole pieces is not obstructed.
Attention: Any gap resp. any obstacle between load surface and pole pieces of the magnet will lead to a reduction of capacity (also refer to air gap in Fig. 3).
- Inspect the pole pieces for even surfaces and parallelism.
- Check the entire load hoisting tackle for damage, cracks or deformations.
- The hand lever must be screwed in safely and easily movable.
- The locking feature of the hand lever must be functional in the "ON" position and lock the hand lever safely.
- Make sure that the weight of the load does not exceed the maximum capacity (W.L.L.) of the load hoisting tackle.
- Refer to Fig. 3 and observe the air gap which has possibly resulted from coatings or other obstacles.
- Round material, pipes, stainless steel and castings will cause capacity reduction which must be taken into consideration (Fig. 3, 4, table 1, 2).
- If the pole pieces cannot be attached in full size due to the type or shape of the lifting material, e.g. on punched plate or corrugated sheet, the maximum capacity must be reduced by the portion of areas which are not in contact with the pole pieces.
- The load material must be rigid enough that it cannot take off the pole pieces by deflection; for large size plates we recommend the use of several load hoisting tackles in connection with a spreader beam.

USING THE HOISTING TACKLE

- Place the load hoisting tackle in demagnetized lever position "OFF" onto the load material (Fig. 1, Fig. 2).
Attention: Take care of good contact with the surface of the load material and consider capacity reduction possibly resulting from

an air gap and material (Fig. 3, 4, table 1, 2).

- Place hand lever in "ON" position and engage safely in the locking mechanism. The load hoisting tackle is now magnetized and the load can be lifted.
Attention: During lifting and transport operations strictly observe the safety rules given under "CORRECT OPERATION" and "INCORRECT OPERATION".
- After completion of the lifting resp. transport operation, make sure that the load has been lowered down safely and cannot slip.
- Release the hand lever by pulling the locking lever and turn to "OFF" position.
- The load hoisting tackle is now demagnetized and can be removed from the load.

DISPOSAL

Plastic parts and non-metallic parts have to be removed and disposed separately.

INSPECTIONS AND SERVICE

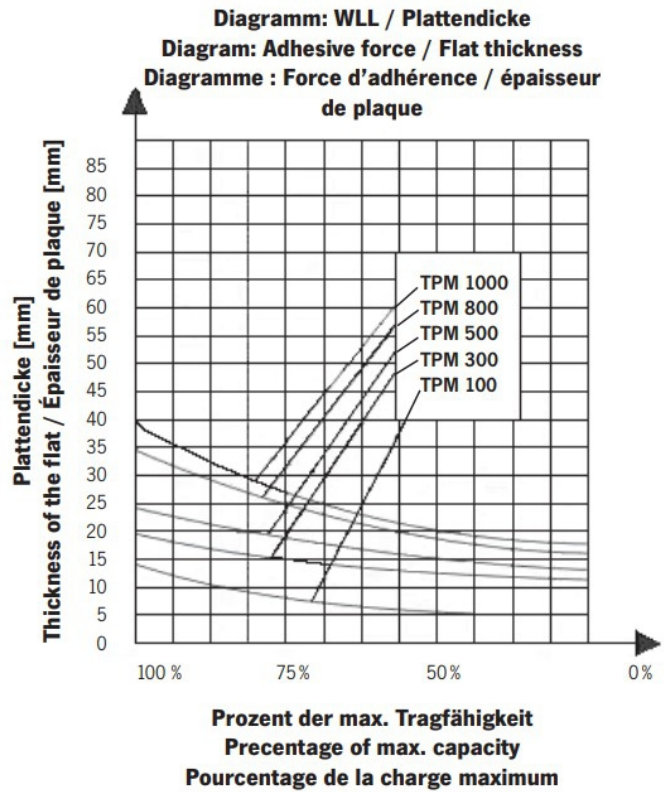
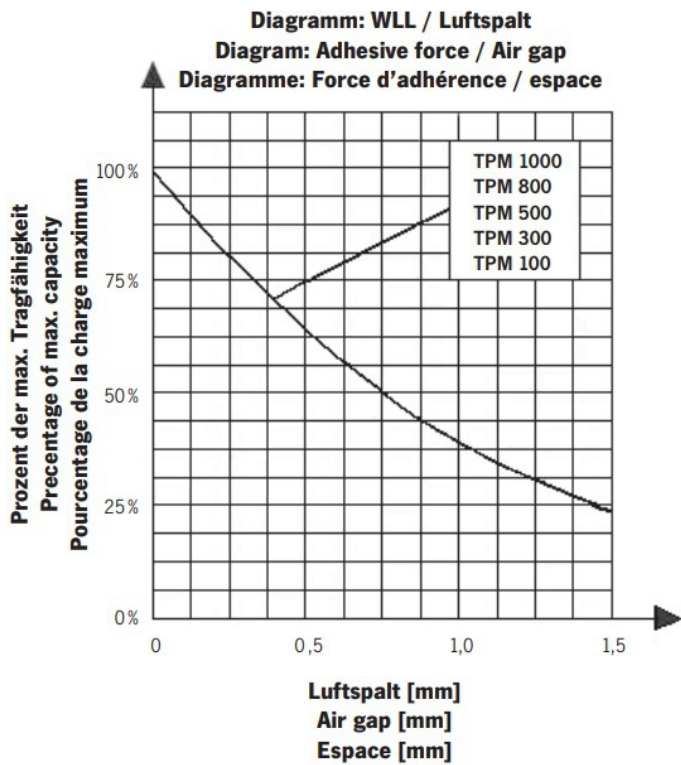
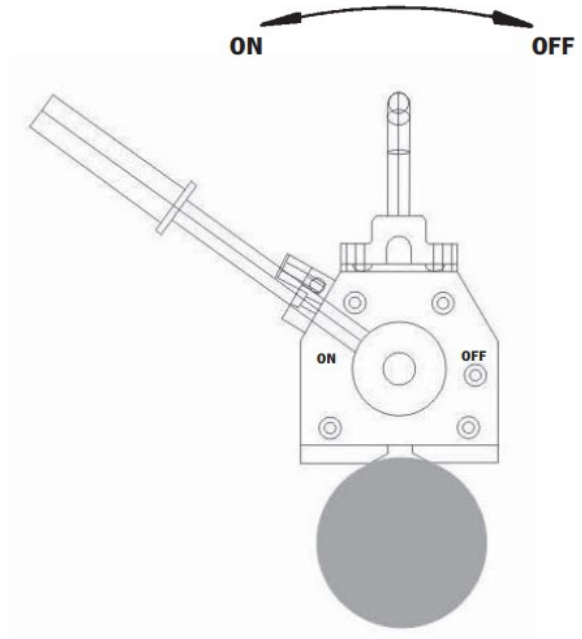
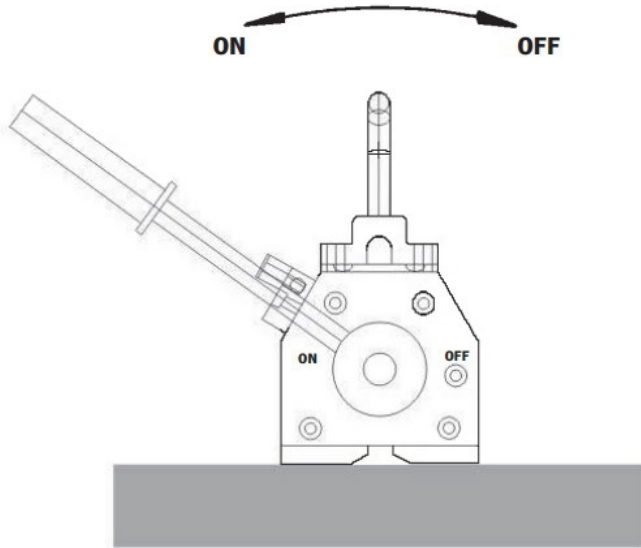
Inspections are to be made by a competent person at least once annually unless adverse working conditions dictate shorter periods. The tackle is to be inspected for damage, wear, corrosion or other irregularities and all safety devices have to be checked for completeness and effectiveness.

Repairs may only be carried out by specialist workshops that use original TIGRIP spare parts.

Inspections are instigated by the user.

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- (D)** Richtige Verwendung
- (GB)** Correct operation
- (F)** Utilisations correctes



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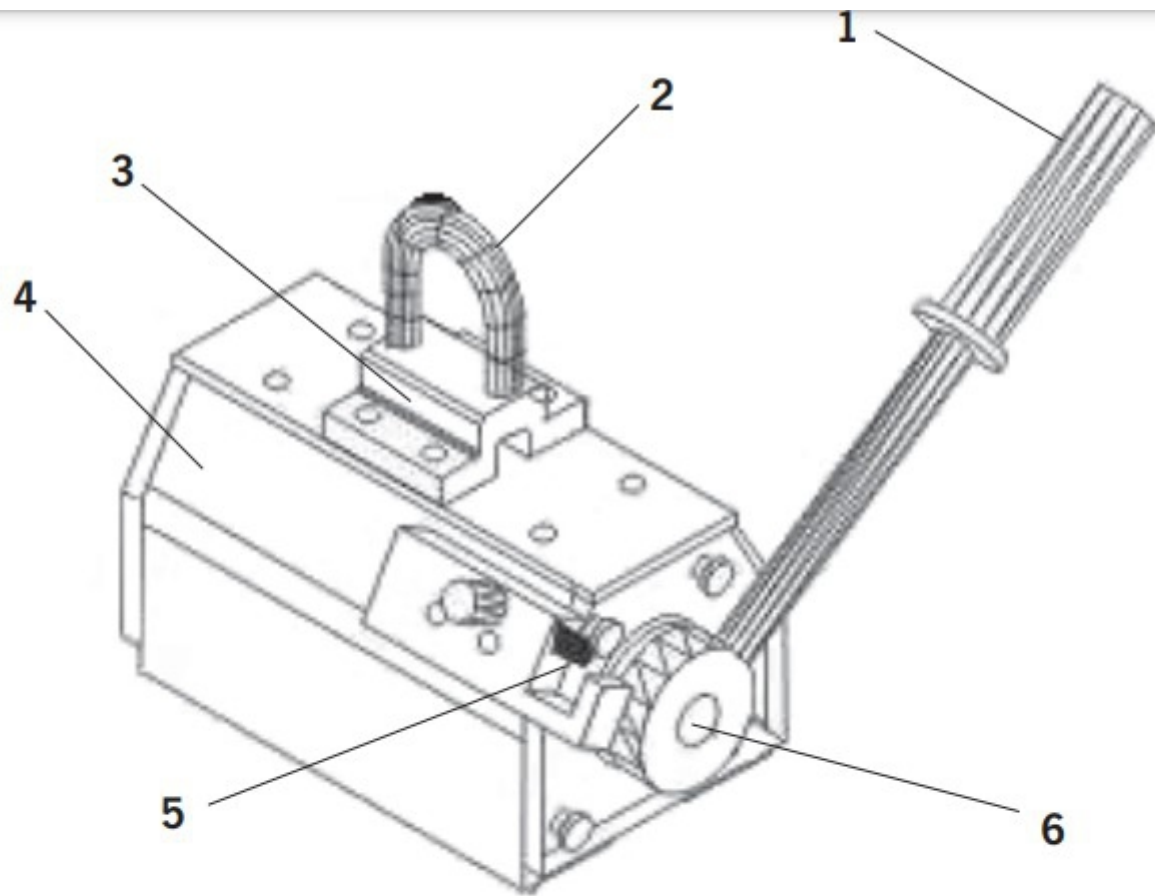


Fig. 5

Bezeichnung

Handhebel
Aufhängeöse
Aufhängeansatz
Gehäuse (Grundkörper)
Feststellvorrichtung
Hauptachse

Description

1 Hand lever
2 Suspension eye
3 Suspension kit
4 Body
5 Locking device
6 Main axes

Description

1 La poignée
2 Anneau de suspension
3 Kit de suspension
4 Corps
5 Système de verrouillage
6 Axe principal

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Typ Type Type	Flachmaterial		Rundmaterial		Materiallänge Length of material Longueur de matériel	Prüflast Proof load Charge de test	Gewicht Weight Poids
	Tragfähigkeit* Capacity* Charge* max. kg	Materialstärke Flat thickness Épaisseur de plaque min mm	Tragfähigkeit* Capacity* Charge* max. kg	bei Ø at Ø à Ø mm			
TPM 0,1	100	5	50	200 - 300	2000	300	6
TPM 0,3	300	10	150	200 - 300	2500	900	15,5
TPM 0,5	500	12	250	200 - 400	3000	1500	29,5
TPM 0,8	800	16	400	200 - 400	3500	2400	53
TPM 1,0	1000	18	500	200 - 400	3500	3000	60

* gemessen auf ziehblankem Material St 37

* measured at mild steel St 37

* mesuré à partir l'acier malléable St 37

Tragfähigkeitsreduzierung Reduction of capacity Réduction de capacité	% von WLL % of WLL % de CMU
Temperatur / Temperature / Température ≤ 60° C	100 %
Luftfeuchtigkeit / Humidity / Humidité ≤ 80 %	100 %
St 52	95 %
Edelstahl / Alloy steel / Acier allié	80 %
Stahl mit hohem Kohlenstoffanteil High carbon steel Acier avec forte teneur en carbone	70 %
Gußeisen / Cast iron / Acier malleable	45 %
Nickel / Nickel / Nickel	45 %
Austenitischer, nicht-rostender Stahl, Messing, Aluminium Austenitic, stainless steel, brass, aluminium Acier austénitique inoxydable, laiton, aluminium	0 %

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GB

EC Declaration of Conformity 98/37/EEC (Appendix II A)

Hereby we declare, that the construction and commercialised execution of the below Lifting Equipment complies with the essential health and safety requirements of the EC Machinery Directive. The validity of this declaration will cease in case of any modification not being agreed with us previously.

Furthermore, validity of this declaration will cease in case that the machine will not be operated correctly and in accordance to the operating instructions and/or not be inspected regularly.

Product:	Non-fixed load lifting attachments	
Type:	Load lifting magnet TPM	Capacity: 100 - 1.000 kg
Serial no.:	Serial numbers for the individual capacities are registered in the production book	
Relevant EC Directives:	EC Machinery Directive 98/37/EEC	
Standards in particular:	ISO 12100; EN 349; EN 13155; BGR 500	
Quality assurance:	DIN EN ISO 9001	