TECHNICAL GUIDE

LIFTING TOWER ELV-125/5

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1. INTRODUCTION

This instruction manual has been drafted pursuant Machinery Directive 89/392/CEE requisites and subsequent amendments.

The instruction manual is an integral part of the Lifting Tower to be consulted before, during and after tower start-up, likewise whenever deemed necessary, respecting the contents for each and all the parts thereof.

This is the only way to achieve the basic objectives established in the manual base such as preventing accident risks and maximum optimisation possible for the Lifting Tower features.

This manual has taken extreme care regarding safety and accident prevention at work while using the machine highlighting information of particular interest to the user.

ATTENTION: PRIOR TO USING THE LIFTING TOWER, READ THIS MANUAL CAREFULLY

2. GENERAL DATA

2.1.- Technical Data

Name	LIFTING TOWER
Model	ELV-125/5
Technical specifications	Maximum height: 5,30m. Minimum height: 1,75m. Maximum load: 125kg. Minimum load: 25kg. Material: Steel as per DIN 2394. Open base area: 2 x 2m. Closed base area: 0,38 x 0,38m. Weight: 60kg. Winch: 450kg maximum load with automatic load retention brake. Cable: Steel as per DIN 3060. Resistance 1770 N/mm^2 torsion resistance. Cable diameter: 4mm. Fixation of tower sections to working height with safety pins. Leg anchorage with safety pins. Bubble level to adjust tower vertical position. Rustproof protection and painting protection finish.

Equipment description	Lifting tower ELV-125/5 designed to vertically raise structures and lighting and sound equipment to different heights. Tested by skilled personnel having passed all the operating, maximum load and dimension inspections.
Company	ROLLSPEED, S.L. (FENIX)
Address	Camino Alquerieta, 10 / 46470 - Massanassa, Valencia (Spain)
Photo	

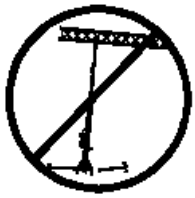
2.2. - Applicable regulations

- Directives 89/392/CE and 98/37/CE on machinery and their amendments.
- BGV C1 (GUV 6.175).
- BGG 912 (GUV 66.15, GUV G-912).
- DIN 3060.
- DIN 2394.

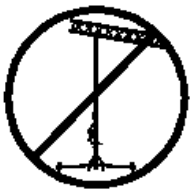
3. GENERAL SAFETY RULES

The lifting tower is an industrial element designed to raise loads vertically, it must NEVER be used as a platform elevator for people.

Only place the lifting tower on firm flat grounds checking it is in vertical position. Do not use wedges or any strange elements to balance the hoist.



Check legs are correctly assembled and secured by their safety pins.

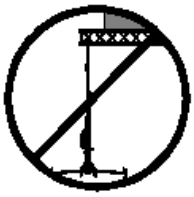


Never raise a load without first checking it is correctly supported and centred on the appropriate hoist supports, so the load only acts vertically.

Never surpass the maximum load capacity indicated on the lifting tower label of characteristics and this instruction manual.

If there is a likelihood of strong wind or gusts, place the lifting tower on the ground and secure it with the aid of straps.

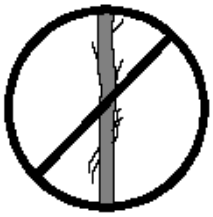
Never use a ladder over the lifting tower or leaning against it for any kind of work.



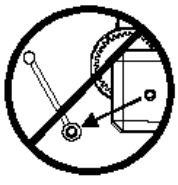
Beware of any kind of projection above the lifting tower like cornices, balconies, luminous signs, etc. It is very important to avoid the presence of cables below the lifting tower working height.

Never move the lifting tower when the load is raised. It is inadvisable to make any kind of movement, even small positioning adjustments.

Never use the lifting tower over any mobile surface or vehicle.



Before using the lifting tower, check the cable state, which must not present any broken threads or compression. NEVER EVER use defective cables and change cable if in doubt. Only use steel cable as per DIN 3060. Quality 1770 N/mm2 torsion resistant.



Fix the lever when the load is raised.

Minimum load for brake function without problems is 25kg. Brake will not function without this minimum load.

Neither grease nor lubricate the winch brake mechanism. Brake disks were greased with a special heat and pressure resistant grease.
No other products must be used to prevent negative influence on brake functioning.

All sections must be lowered to transport the lifting tower.

4. HOW TO USE

1. Place the lifting tower over firm flat surface at its work site.
2. Remove the pin from point **J** and put it in point **F.** Activate the tensor (**G**) in all its outriggers until stabilize the lifting tower in the surface.
3. Put the load on top of the tower using the suitable support, in order to make work the weight of the load only in vertical direction. The minimum load must be 25kg.
4. Elevation: Turn the winch crank (**M**) clockwise to lift the load until the wished position, checking that safety pins (**K**) are activated.
5. Lowering: release the safety pins (**K**). To release them, turn the winch in the appropriate way to elevate the carriage. In the normal working position, the load's weight does not allow to release the pins. Once the safety pin (**K**) is unblock, turn the winch crank (**M**) opposite clockwise until lowering the load, profile **1** is completely down. Release the safety pins (**K)** and keep on lowering the lifting tower until the second profile is completely down. Finally, unblock the safety pin (**K**) and continue lowering the tower until the lifting tower is completely folded as its maximum folded height.
6. For the lifting towers' transport is necessary to fold the lifting tower lowering completely all the profiles blockading them with the safety pin (**K**) and put it in position (**L**).

5. MAINTENANCE

1. Periodically check cable state. Should cable present broken threads or crushing, replace immediately with a new one. Never use the lifting tower with cables in bad condition. Only use steel cable DIN 3060 torsion resistant.
2. The lifting tower is supplied fully greased from factory. Nevertheless, periodical greasing recommended as per use, the cogged crown of the winch, bearings of the actioning shaft and bushing, lever thread and sections.

WARNING:

DO NOT GREASE OR LUBRICATE BRAKE MECHANISM

Brake disks were greased with a special heat and pressure resistant grease. No other product must used to prevent negative influence on brake functioning.

3. Lifting tower ELV-125/5, must be checked by an expert once a year minimum as per its use.
4. Only original spares must be used to ensure continued safe use. The user loses all guarantee rights if spares other than the originals are incorporated or modifies the product in any way.
5. To request any spare ask the manufacturer.

6. SPECIFIC RISKS

Brake system failure

May occur due to brake system deficiencies or bad installation. If it stops working it could cause a serious risk of loss of raised load control and injure users or hit materials close to the tower.

Loss of stability

If the tower is placed on sloping ground or a surface that is not completely flat there is a loss of stability risk which would lead to a 90º overturn with risk of serious injuries for workers.

Objects dropping to a different level

As an elevation element, working high up means there is a serious risk of raised objects dropping to a different level, either due to securing mechanism failure, part wear, dirt, etc., or incorrect use of the tower (E.g.: for elements over the maximum load allowed). Sudden drop of raised material implies a serious risk for the worker.

Knocks and/or contusions due to objects

This risk only occasionally causes an accident to the worker running the operation, given his location during the elevation process; the risk of knocks from a raised element is more likely to affect people walking by or whose workplace is close to the lifting tower.

Its origin may be due to loss of stability, malfunctioning of structural elements, safety systems, securing systems, etc.

7. PREVENTION SYSTEMS

Brake system failure

Have a winch as per standard BGV C1 (GUV 6,15).

Loss of stability

Maintenance of lifting tower stability must basically be as per the following measures:

- Professionalization, training and risk awareness of lifting tower users.
- Equip with different safety devices and advice from the manufacturer to reinforce stability, like:
  - Safety pins which secure the lifting tower once raised.
  - Bubble level to help vertical adjustment.
  - Marking maximum load the lifting tower can raise.
  - Maximum slope specification which the lifting tower can access safely.

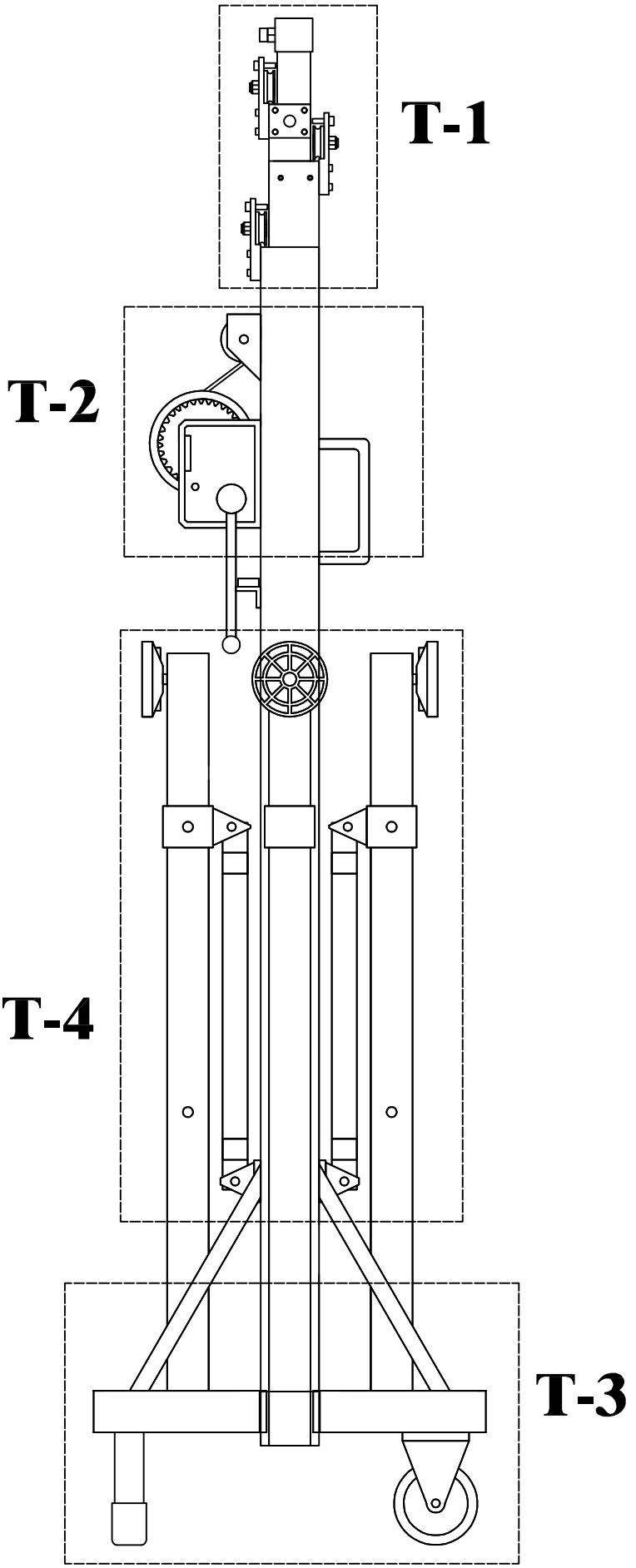
Objects falling to a different level, knocks and/or contusions from objects

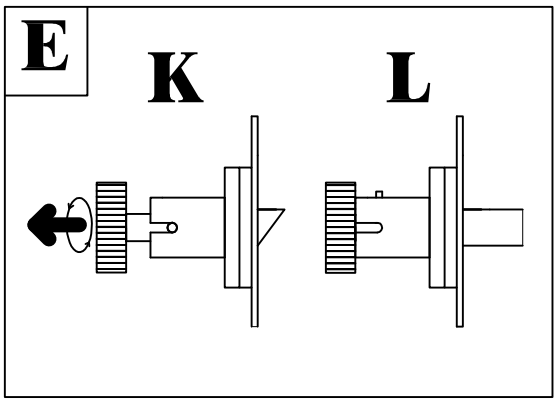
The risk of objects falling to a different level can be prevented using homologated safety elements, e.g., a safety pin which fixes the interior section of the lifting tower to working position, so the cable does not support load and guaranteeing impossibility of a drop. In the event of cable breakage, brake functions automatically. Furthermore, if steel elements have been zinc coated this protects the entire unit from oxidation and corrosion.

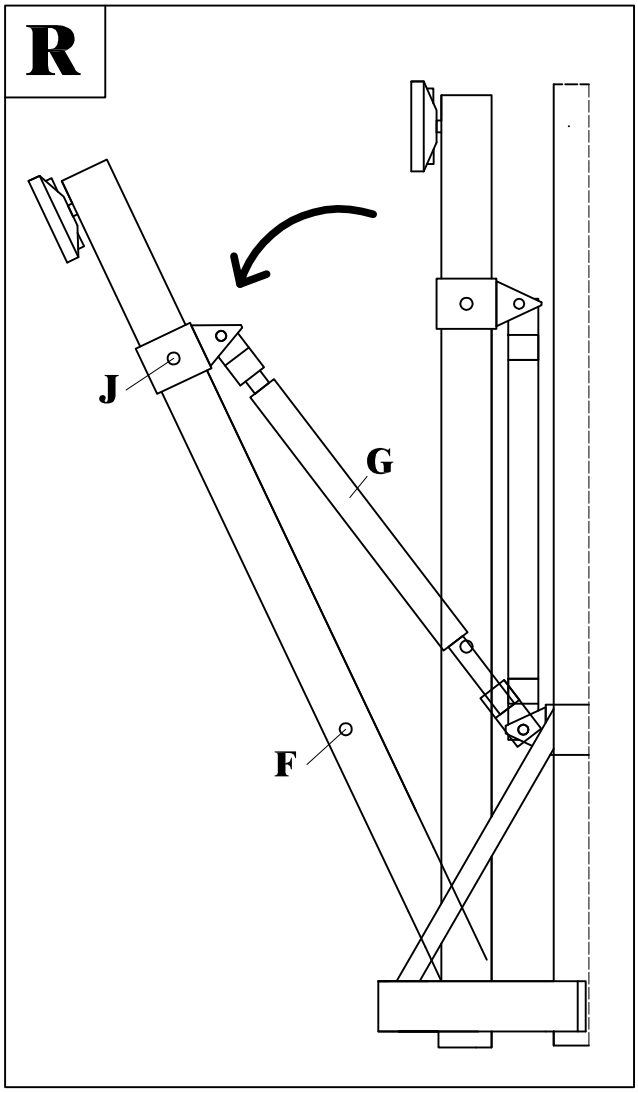
These risks can also be minimised with correct lifting tower maintenance. The user must perform periodical inspections on safety elements and make the necessary repairs on detecting deficiencies.

Furthermore, the consequences of these risks can be reduced limiting access area to the lifting tower and with correct training of personnel.

ELV-125/5







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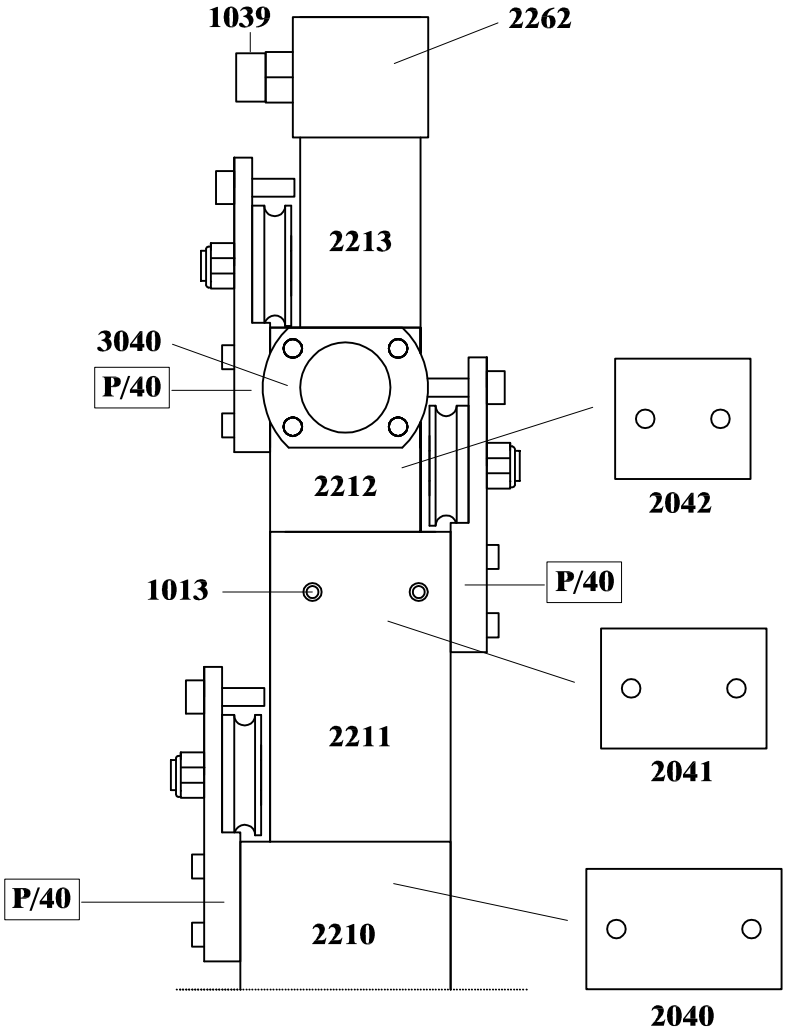
ELV-125/5



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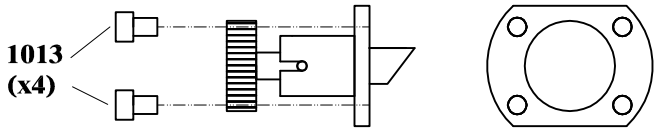

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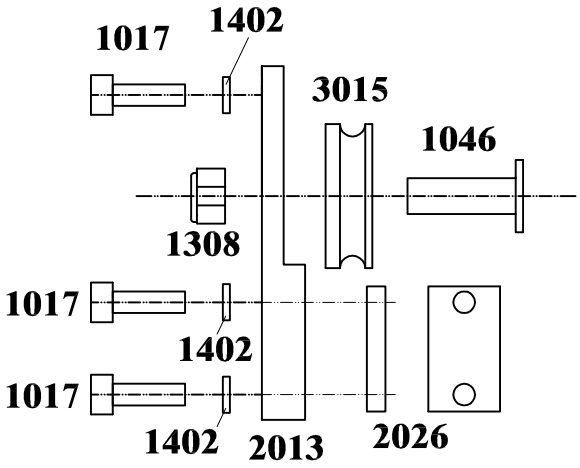

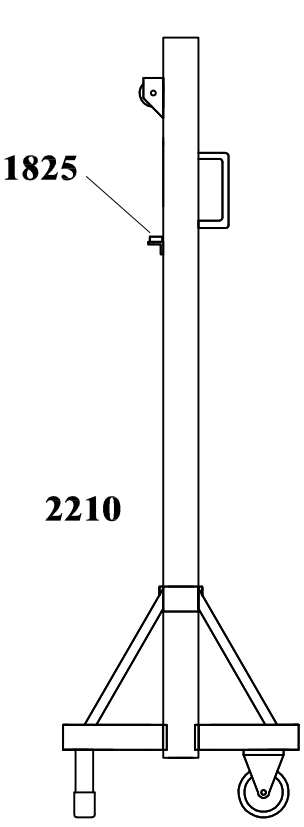

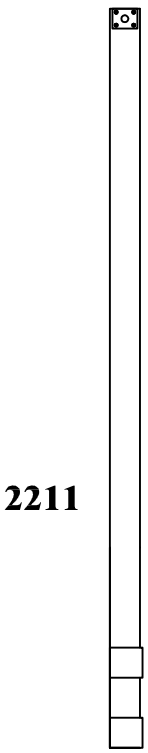

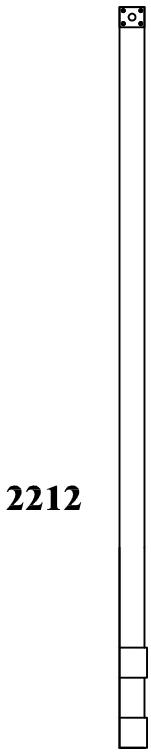

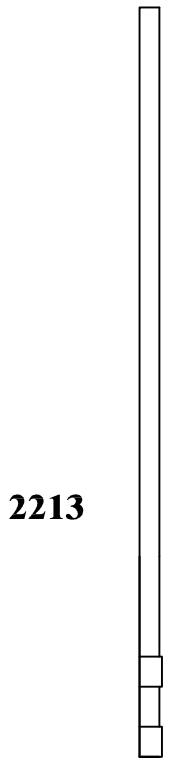

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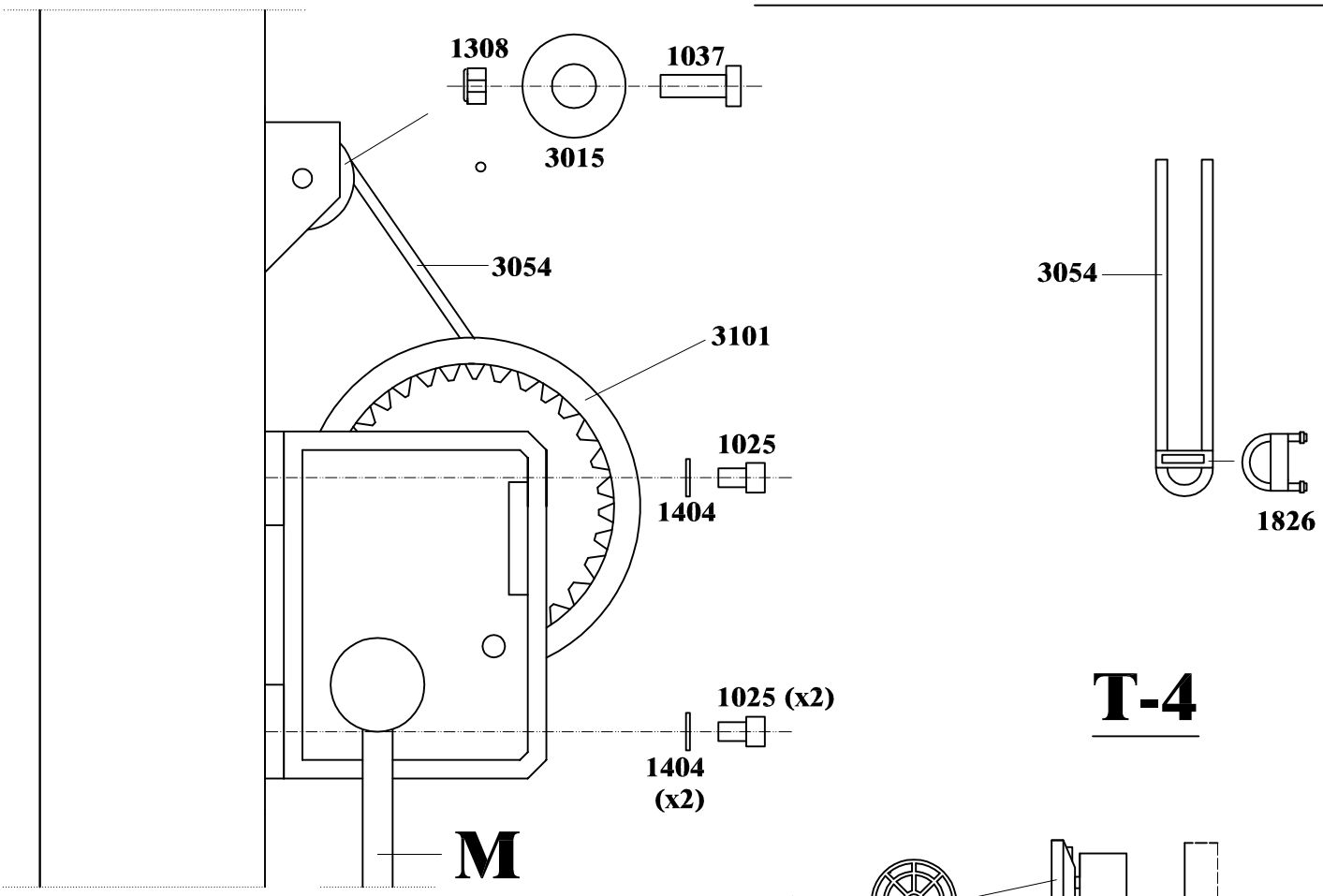

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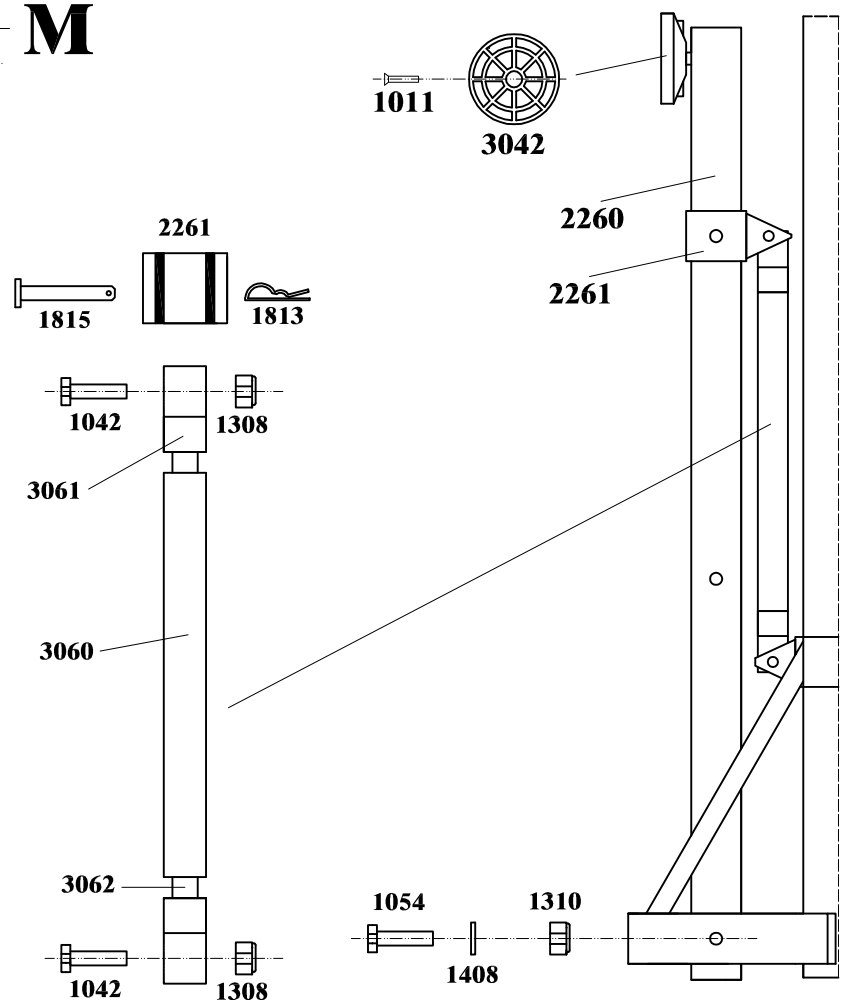

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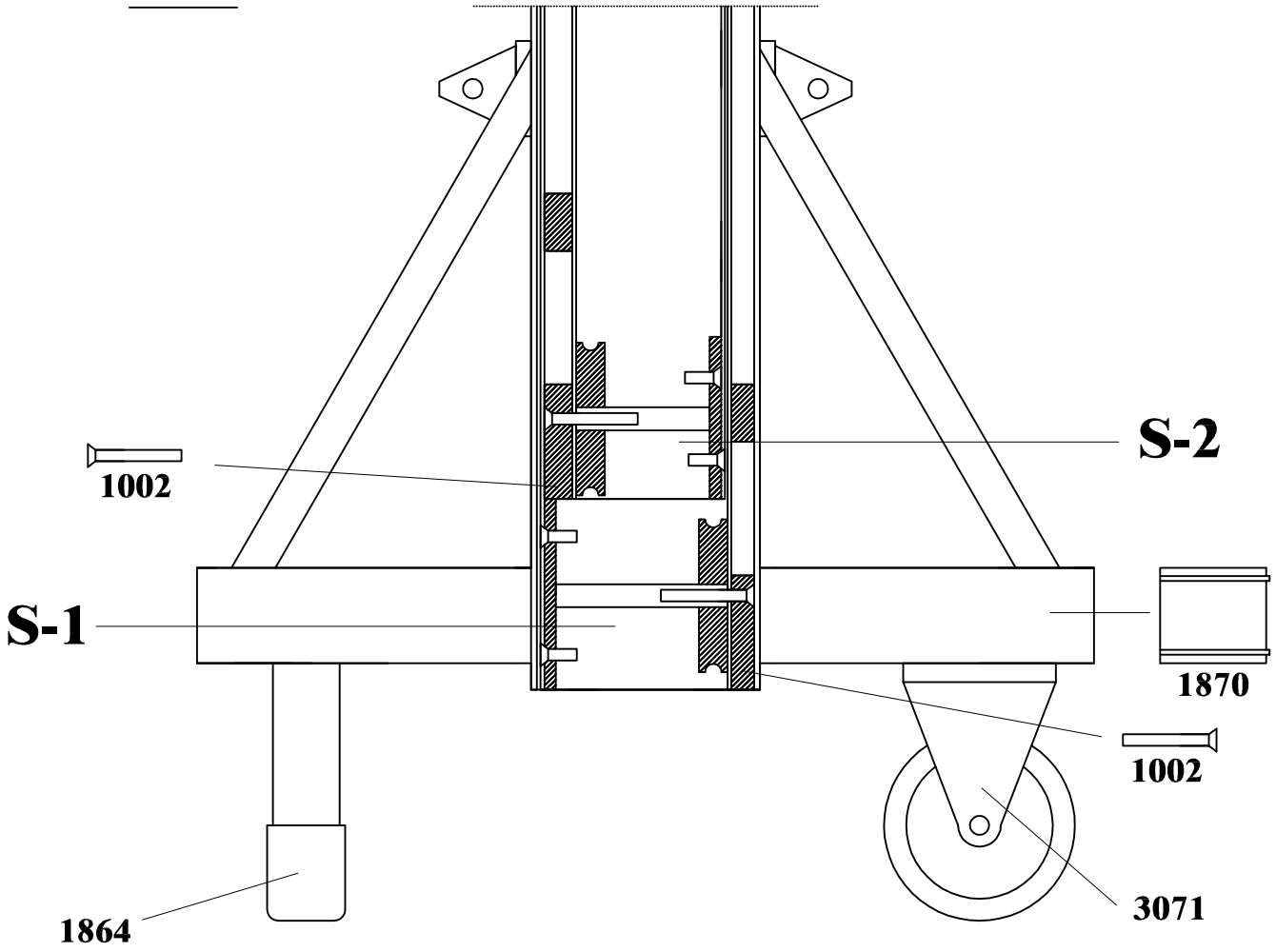
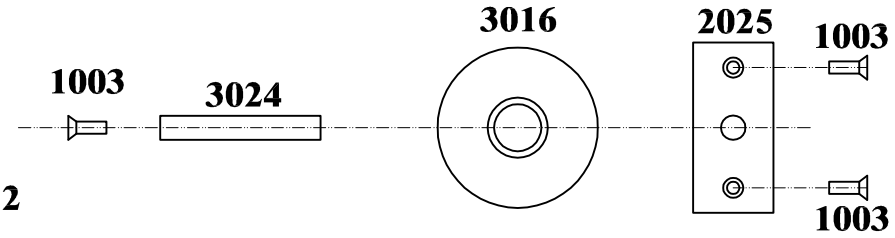
T-3



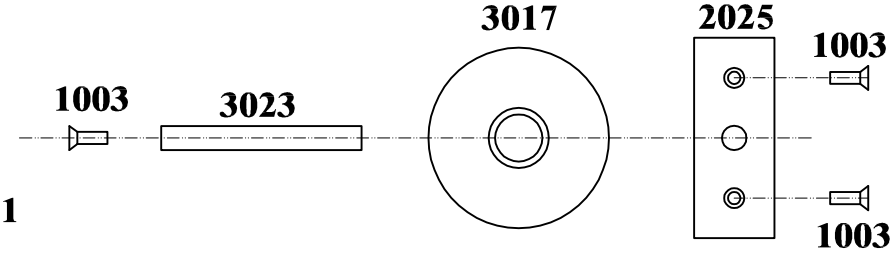
S-2

Tramo 2212



S-1

Tramo 2211



REF.	Descripción / Description / Beschreibung / Description
1002	Tornillo cónico / Conical screw / Kegel / Vis conique
1003	Tornillo cónico / Conical screw / Kegel / Vis conique
1011	Tornillo cónico / Conical screw / Kegel / Vis conique
1013	Tornillo allen / Allen key / Inbus / Vis allen
1017	Tornillo allen / Allen key / Inbus / Vis allen
1025	Tornillo allen / Allen key / Inbus / Vis allen
1037	Tornillo allen / Allen key / Inbus / Vis allen
1039	Tornillo allen / Allen key / Inbus / Vis allen
1042	Tornillo hexagonal / Hexagonal screw / sechseckig / Vis héxagonal
1046	Tornillo portapolea / Pulley-holder screw / Schraube / Vis
1054	Tornillo hexagonal / Hexagonal screw / sechseckig / Vis héxagonal
1308	Tuerca / Nut / Mutter / Écrou
1310	Tuerca / Nut / Mutter / Écrou
1402	Arandela / Washer / Dichtung / Rondelle
1404	Arandela / Washer / Dichtung / Rondelle
1408	Arandela / Washer / Dichtung / Rondelle
1813	Pasador R / R clip / R Clip / Goupille R
1815	Pasador recto / Straight clip / Clip / Goupille droite
1825	Nivel burbuja / Bubble level / Wasserwaage / Viveau boussolle
1826	Prisionero fin de cable / Cable end lock / Kabelendverschluss / Verrouillage fin cable
1864	Tapón plástico / Plastic stopper / Plastikverschluss / Bouchon plastique
1870	Cantonera / Corner protector / Schützenecken / Protecteur coin
2013	Pletina acero / Steel plate / Stahlplatte / Platine de fer
2025	Pletina interior / Plate inside / innen Platte / Platine interieur
2026	Pletina interior superior / Upper inside plate / Ueber innen Platte / Platine interieur superieur
2040	Pletina interior / Plate inside / Innenplatte / Platine interieure
2041	Pletina interior / Plate inside / Innenplatte / Platine interieure
2042	Pletina interior / Plate inside / Innenplatte / Platine interieure
2210	Mastil / Mast / Mast / Mât
2211	Barra / Bar / Leiste / Barre
2212	Barra / Bar / Leiste / Barre
2213	Barra / Bar / Leiste / Barre
2260	Pata / Leg / Abschnitt / Pied
2261	Casquillo pata / Leg / Abschnitt / Douille pied
2262	Contera / Chape / Verstärkung / Embout
3015	Polea / Pulley / Scheibe / Poulie
3016	Polea / Pulley / Scheibe / Poulie
3017	Polea / Pulley / Scheibe / Poulie
3023	Eje / Axis / Achse / Axe
3024	Eje / Axis / Achse / Axe
3040	Gatillo completo / Complete pin / vollständiger Auslöser / Déclancheur complet
3042	Plato poliamida / Polyamide plate / Polyamidplatte / Plaque de polyamide
3054	Cable acero / Steel cable / Stahlkabel / Cable de fer
3060	Tubo tensor patas / Legs' tensor tube / Dehnungstunnel / Tube tenseur de pieds
3061	Top varilla / Rod top / Stabspitze / Tope baguette
3062	Varilla roscada / Threaded bar / Stab / Filetage baguette
3071	Rueda / Wheel / Rad / Roue
3101	Cabestrante 450kg / Winch 450kg / Winde 450kg / Treuil 450kg