



our ideas, your solutions

**Simol S.p.A.**

Via Fiocchetti, n.14

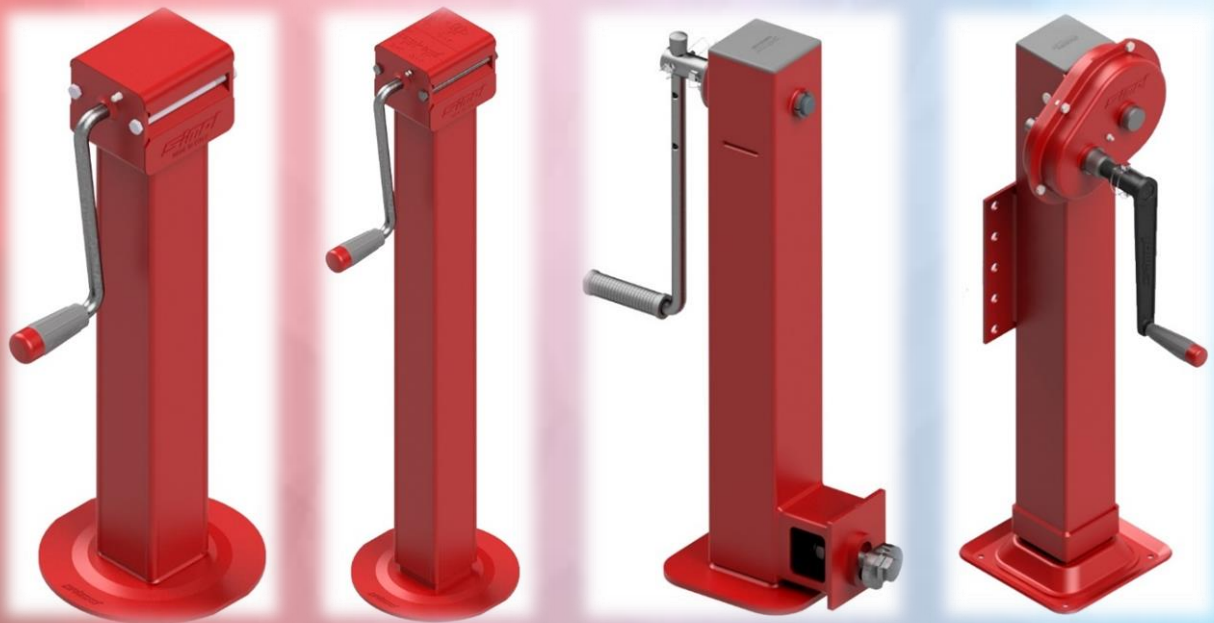
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## **USER AND MAINTENANCE MANUAL**

### **"HUMAN-POWERED MECHANICAL JACKS"**



**TRANSLATION OF THE ORIGINAL INSTRUCTIONS**

*Rev. 1 of 10/09/2024*

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## 1.1 INTRODUCTION

The machines manufactured by **Simol S.p.A.** are human-powered devices equipped with a support base and, if necessary, an attachment point to the main equipment to be lifted and supported. They are designed for the support, stabilisation and height adjustment of machinery/equipment of various kinds. The machines in question must not be used for other types of uses without the express authorisation of **Simol S.p.A.**

**Simol S.p.A.** devices have been designed to ensure the best results, with the premise that all operating and maintenance instructions, recommendations and warnings described in this manual must be observed.

The operations are carried out in conditions of full safety for operators if observance of the indications and warnings is guaranteed as provided in this user and maintenance manual and on the machinery.

**WARNING:** for the sake of clarity, some images in this manual may depict the machinery without some of the protective devices/guards. This is solely for explanation purposes. It is forbidden to use the machinery without protections or with the safety devices disabled.



**NOTE:** the machines are designed to be used with various types of equipment (containers, trailers, etc.). The machines must not be put into service until they form a single body with the equipment to be lifted and supported. Nevertheless, in order to make the operating logic and the adopted safety measures even more understandable, these installation instructions include photos and notes indicating the real conditions of installation of the machinery, complete with all its components.

### IMPORTANT!

The managers of equipment are required to observe the standards and warnings provided in the instructions above; so as to provide the maximum possible safety for staff operating on the machinery.

This manual is an integral part of the machines and is intended to provide all the information necessary for their safe use.

## 1.2 REFERENCE LEGISLATION AND STANDARDS

- **MACHINE DIRECTIVE 2006/42/EC** implemented in Italy by Legislative Decree 17/2010;
- **UNI EN ISO 12100:2010:** Safety of machinery - Principles for risk assessment.

## 1.3 CE PLATE

The machines are equipped with a nameplate showing the identification characteristics; should the need arise for any intervention or enquiry, it is necessary to communicate the data on this nameplate in order to precisely identify the model. In addition to the identified data, there is technical data on the product.



Fig. 1.1: CE plate facsimile.

## 1.4 EC DECLARATION OF CONFORMITY

### DECLARATION OF CONFORMITY TO THE MACHINE DIRECTIVE (facsimile)

Attached is a facsimile of the Declaration of Conformity certifying compliance with regulations and safety requirements throughout the development and realisation of the product.

## EC DECLARATION OF CONFORMITY

(Annex II, Part 1, Section A of Directive 2006/42/EC)

Translation of the original language of the Manufacturer's document

The undersigned company **Simol S.p.A.** with registered office at Via M. Fiocchetti, no. 14 - 42045 Codisotto di Luzzara (RE) - Italy, in the person of Mr. \_\_\_\_\_, Legal Representative,

### DECLARES THAT

- the machine is identified as:

<b>DESIGNATION</b>	Human-powered mechanical jack
<b>MODEL</b>	
<b>LOT</b>	
<b>FUNCTION</b>	Support, stabilise and perform height adjustments of machinery, equipment or parts thereof
<b>YEAR OF MANUFACTURE</b>	

- complies with all relevant provisions of Machinery Directive 2006/42/EC
- the person authorised to compile the technical file is Mr. \_\_\_\_\_, c/o Simol S.p.A., Via M. Fiocchetti, no. 14 - 42045 Codisotto di Luzzara (RE) - Italy.

Codisotto di Luzzara (RE), \_\_\_/\_\_\_/\_\_\_\_\_

\_\_\_\_\_  
Mr. \_\_\_\_\_  
Legal Representative

## 1.5 LIABILITY AND WARRANTY

### WARRANTY

The manufacturer agrees to guarantee the equipment described in these instructions for the period set forth by contract and nevertheless in compliance with the legal provisions in force, and for that period agrees to repair or replace the faulty parts or due to a malfunction, as long as the machinery has been use correctly in observance of the indications set forth in these installation instructions.

The warranty lapses if:

- The equipment has been tampered with by staff not authorised by **Simol S.p.A.**;
- Non original parts not supplied by **Simol S.p.A. have been used**;
- Poor maintenance and anomalous use of the equipment;
- The warranty excludes the parts of the equipment that are subject to wear.

### LIABILITY

Nevertheless **Simol S.p.A.** will not he held liable for operating anomalies or generic faults caused by unauthorised use of the equipment or by interventions and/or changes carried out by external people non authorised by **Simol S.p.A.**

#### IMPORTANT!

**Simol S.p.A. will not be held liable in case of assembly, installation, use, changes or fitting of the product other than described in these instructions. If the equipment shows any signs of damage, please read the terms to return the product. Accessories not mentioned in these instructions must not be used**

## 1.6 REQUEST FOR INTERVENTION/TECHNICAL ASSISTANCE




















The customer assistance service is managed directly by the manufacturer, therefore, in case of need it is necessary to contact them through their mailing address, e-mail, telephone, fax stated below:

**Simol S.p.A.**  
Switchboard  
E-mail

**Via Fiocchetti n.14 - 42045 Codisotto di Luzzara (RE) - Italy**  
**Tel. +39 0522 976728**  
[customercare@simol.com](mailto:customercare@simol.com)

## 2.1 OPERATOR SAFETY RULES

The regulations listed below must be read carefully and become a fundamental part of the daily practice of operating and servicing the machinery, in order to prevent any type of injury to people and/or damage to property.

-  Before installing the machines, check them for damage and their proper functioning.
-  Do not try to start the machinery until operation and installation modes have been fully understood. In case of doubt, even if you have read these instructions carefully and fully, contact **Simol S.p.A.**
-  Make sure that all of the regulations relative to safety are known by staff involved in installation, cleaning, maintenance and use of the machinery.
-  It is compulsory to keep all of the plates with danger, safety signs and instructions for use in perfect conditions. In case of damage or deterioration it is necessary to replace them promptly.
-  Never start the machinery without having warned all staff in proximity. The protective devices must never be removed or disabled when the equipment is in operation.
-  Before starting up the machines, the operator must check for any visible defects on the structure and its components. If any are found, immediately inform the manager of the discovered defect. In this case, immediately notify **Simol S.p.A.** of every evident breakage of the system structure or of any other functional part.
-  During maintenance, adjustment or repair work, it may be necessary to remove some protections. This operation needs to be carried out by authorised staff only.
-  Do not actuate the machinery with the fixed guards taken down. The operator's clothing must be as suitable as possible, meaning not too loose and without any dangling parts that could get caught. Do not wear clothing, ornaments, accessories that could get caught in moving parts. Do not wear belts, rings, bracelets and necklaces.
-  Replace the parts that are deemed faulty with others recommended by **Simol S.p.A.** NEVER try chance solutions.
-  Do not for any reason whatsoever work on moving parts, even if it is to clear a jam. It is forbidden to inspect the machinery during operation.
-  Always wear protective goggles, ear plugs, safety footwear, work clothing, gloves and any other personal protective equipment for the zones that so require it.
-  It is forbidden to lean on the machinery or parts of it while it is in operation. It is forbidden to sit on and/or lean on parts of the partly completed machinery. It is forbidden to modify the parts of the equipment or apply further devices to it without the authorisation of **Simol S.p.A.**
-  It is not allowed to have staff work on the machinery if in possession of a different qualification than required. Do not approach hands, arms or any part of the body to the moving parts.
-  To search for or remove the cause of any malfunction or inconvenience, implement all of the precautions, described in the instructions, suitable for preventing any damage to people and/or property.
-  Before starting any installation, maintenance or use, focus all of your attention on what needs to be done. It is necessary to be extremely careful and always alert and ready; these are fundamental conditions for the operator.
-  If the operator feels ill or is experiencing unfavourable physical condition, including slight, that could reduce his/her level of alertness, he/she must avoid starting up the equipment or using the combined or accessory equipment and notify his/her supervisor.
-  Never perform maintenance or fine-tuning work alone. There must always be another person just in case, so as to be able to provide first aid in case of illness/emergency.
-  The user instructions have been drafted so that the operator can work safely with the machinery.
-  Anyone who has not seen or is not familiar with these user instructions cannot install or operate the machinery.



Before fitting and start-up, carefully read these assembly instructions. Observe the safety warnings, in particular.



These user instructions are intended for people with basic technical knowledge on the use of similar devices to those described in this document.



Do not work with the machinery after consuming alcohol, medicine that lowers reactivity, or drugs.



The machinery in question is not designed for use by people (including children) with impaired mental faculties and/or without experience and/or without due knowledge, unless they are supervised by a person competent in safety or who has received instructions/training on how to use the devices.



The manufacturer accepts no liability for damage caused by failure to observe these operating instructions.



The machinery in question is not suitable for pulling nor lifting objects, people, animals.

## 2.2 SAFETY SYMBOLS AND STICKERS

Machinery may have plates attached to them with the following symbols, to highlight possible hazards and obligations that the operator is required to observe during their operation:



### **HANDS/FEET CRUSHING HAZARD**

This symbol indicates the existence of a hands/feet crushing hazard due to moving parts. This hazard is particularly reported in connection with the vertical movement of the jack base and the vertical movement of the supported load.

When the operator sees the warning, he/she must approach with care and only if equipped with due PPE. It will also have to verify the presence of other operators in the work area.



### **DO NOT REMOVE THE SAFETY PROTECTIONS**

Applied on fixed guards.



### **READ THE ASSEMBLY INSTRUCTIONS**

Before starting any operational action, it is compulsory to read this instructions manual. Anyone who does not apply the following may experience irreparable damage or cause it to people or property. It is strictly forbidden to operate or have the machinery operated by anyone who has not read, understood and assimilated the entire contents of this manual.



## 2.3 PERSONAL PROTECTIVE EQUIPMENT

The operator, before starting work, must be familiar with the layout and operation of the controls and characteristics of the machinery and must have read this manual in its entirety and any attached manuals.

**IMPORTANT!**

**The operator must always observe the rules stated on the signage on the machinery.**

**IMPORTANT!**

**The worker is required to use personal protective equipment to perform the lifting and transport, operating, maintenance and cleaning operations of the machinery in full safety.**

The P.P.E. (personal protective equipment) that the operator must use as needed is:



**DURING OPERATION, MAINTENANCE AND CLEANING:**

Work clothing, footwear with non-slip sole, gloves.

## 2.4 AIRBORNE NOISE

The machines have been designed and manufactured in such a way that the noise emission value is as low as possible.

The value of the airborne noise level produced by machines and declared by the manufacturer cannot be used directly to establish the exposure of operators; the assessment of noise risk in the working environment must be carried out according to the relevant legislation in force at the place where the machine is used.

The possible protective measures to be taken are in fact linked to other factors such as, for example:

- the presence of other work sources in the vicinity
- the characteristics of the environment
- the operator's time spent at the various workstations.



**The assessment of the noise risk of the working environment, the adoption of all necessary safety measures (use of individual hearing protection devices) and the possible implementation of permanent soundproofing systems, are the obligation of the employer and are outside the responsibility of the machine manufacturer.**

The measured sound pressure level  $L_{pA}$  at the operator's station was < (less) than 70 dB(A).

**IMPORTANT!**

**Prolonged exposure above 80 db(A) can cause harm to health.**

**Use protective equipment such as ear plugs, ear muffs, etc.**

## 2.5 VIBRATIONS

The use of the machines does not pose any risks to operators related to vibrations.

## 2.6 RADIATION

The machines do not involve the emission of functional radiation that can have an adverse effect on people.

The use of the machines poses no radiation-related risks to the operators.

## 2.7 RESIDUAL RISKS

The machines in question are designed and built so as to guarantee user safety. There are nevertheless some residual risks linked to incorrect installation and use by the operator; for this purpose hazard signs and symbols can be displayed near and on some parts of the equipment.



**HANDS/FEET CRUSHING HAZARD**

As the major risks are posed when the operator enters the danger zones to adjust, clean, service the equipment or perform other necessary manual operations, said operations need to be carried out with the utmost care.



**It is forbidden to climb onto the machinery or place materials or objects on it.**

### **RESIDUAL RISK OF HANDS/FEET CRUSHING**

Due instructions for use are provided on the machinery. The moving parts are completely enclosed by fixed guards, yet a potential residual risk of crushing hands/feet strictly linked to incorrect operator manoeuvres remains.



#### **HANDS/FEET CRUSHING HAZARD**

**This symbol indicates the existence of a hands/feet crushing hazard due to moving parts. This hazard is particularly reported in connection with the vertical movement of the jack base and the vertical movement of the supported load.**

To lower this risk: when the operator sees the warning, he/she must approach with care and only if equipped with due PPE. It will also have to verify the presence of other operators in the work area.

### 3.1 TECHNICAL SPECIFICATIONS

The functional purposes of **Simol S.p.A.** devices is to support, stabilise and adjust the height of machines, equipment or parts of them. Depending on the model, (see paragraph 3.2) **Simol S.p.A.** devices can differ by the following characteristics:

- Jack size
- Screw stroke
- Maximum dynamic load
- Maximum static load
- Optional installable heights and angles.

The technical issues you are asked to seek the aid of the **Simol S.p.A.** technical assistance staff.



**Every other use differing from the above is not allowed and will be considered non-compliant. It may also be dangerous and cause damage to property, people and the environment.**



**No other use than the one described above is allowed, as it may pose a great danger of accidents with serious and persistent consequences for man and the environment, as well as material damage.**

All of the warnings for safety and use contained in these instructions must be read along with the instructions set forth in the technical documentation of the trailer or the equipment to be lifted/serviced.

As for possible applications, types of fastening and capacities, refer to the technical data.

- The maximum allowed stroke is declared by the manufacturer in the catalogue under “Screw stroke”;



**ATTENTION: Do not extend machines beyond the maximum permitted stroke.**



**ATTENTION: Do not subject the machines to loads exceeding the maximum permissible load capacity.**



**ATTENTION: It is the responsibility of the integrator in the final equipment to test the application of the machines. Consult the final equipment booklet to find out the actual load capacity required.**



**It is necessary to consider the environmental conditions that the supplied machinery operates in.**

### 3.2 GENERAL DESCRIPTION OF THE MACHINES

The machines manufactured by **Simol S.p.A.** are human-powered devices equipped with a support base and, if necessary, an attachment point to the main equipment to be lifted and supported. They are designed for the support, stabilisation and height adjustment of machinery/equipment of various kinds. The machines in question must not be used for other types of uses without the express authorisation of **Simol S.p.A.**

**Simol S.p.A.** devices have been designed to ensure the best results, with the premise that all operating and maintenance instructions, recommendations and warnings described in this manual must be observed.

The operations are automatically carried out in conditions of full safety for operators if observance of the indications and warnings is guaranteed as provided in the original assembly instructions and on the machinery.



**ATTENTION:** The parts described in this chapter can only be replaced by a qualified expert. The risk of injury increases due to incorrect use and can cause material damage.

The machines are composed of the following main parts:

#### VERSION DG706 (human-powered)

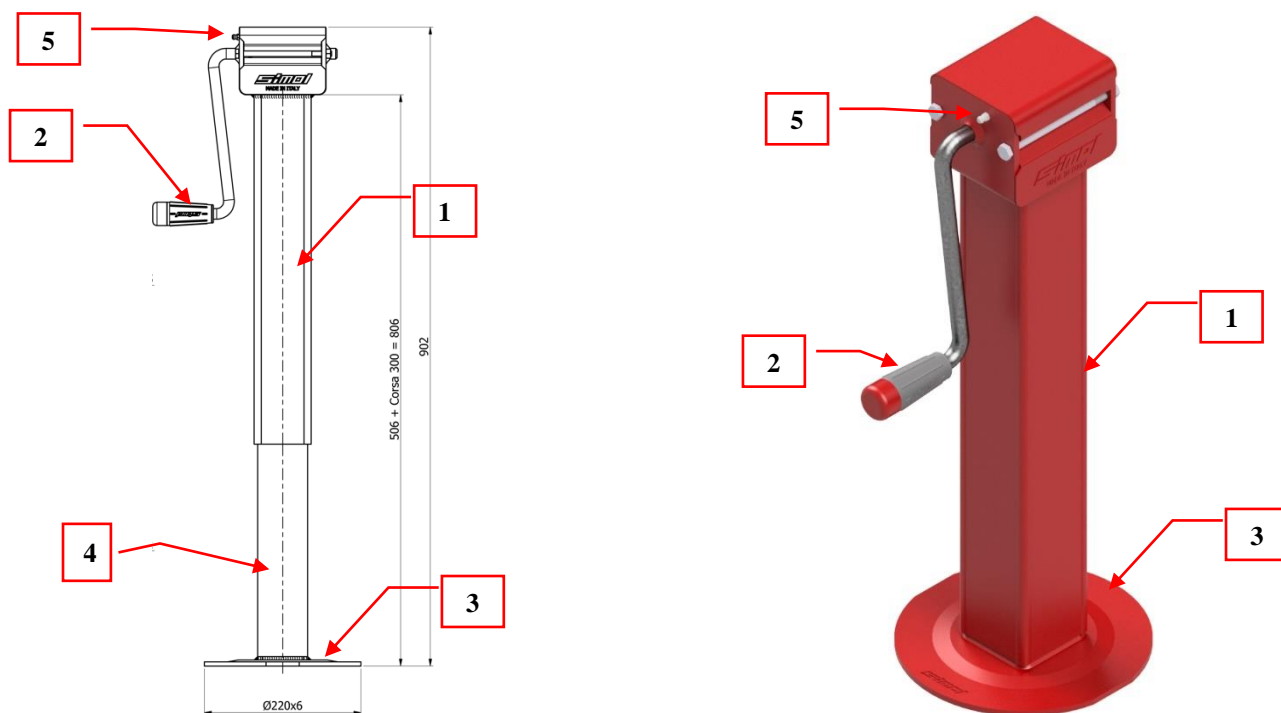
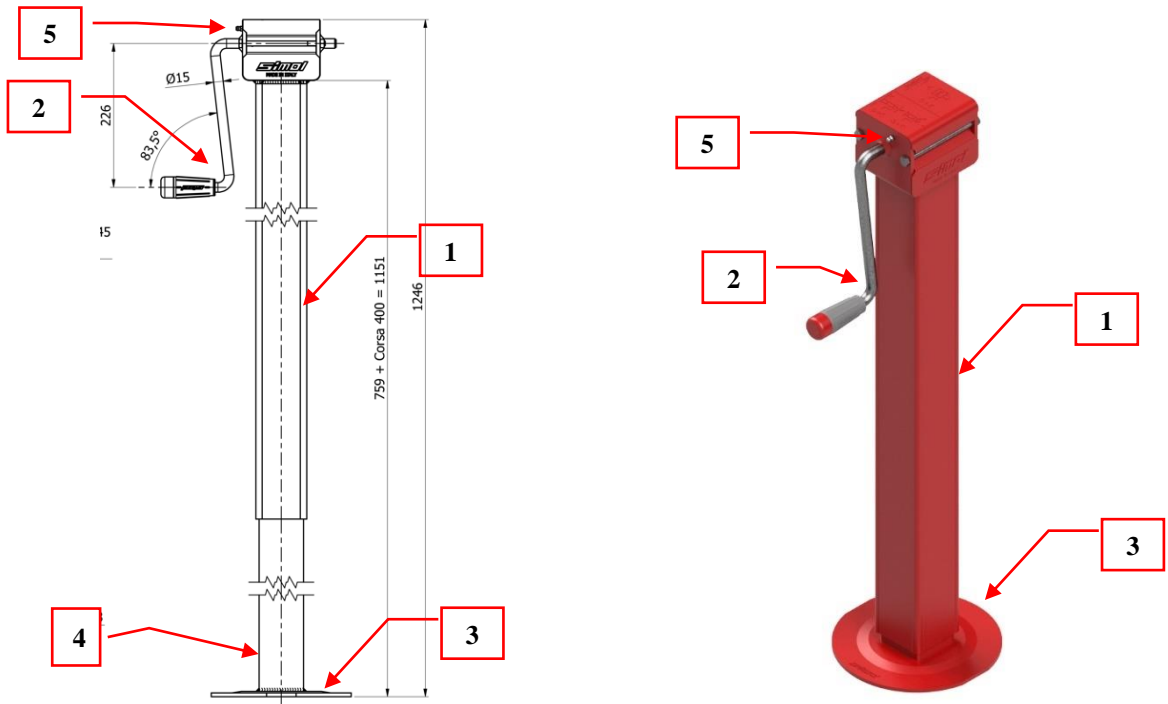


Fig. 3.1: DG706 version.

Position	Name
1	External pipe (position for warning stickers)
2	Control part for height adjustment
3	Footed base
4	Internal pipe
5	Greaser

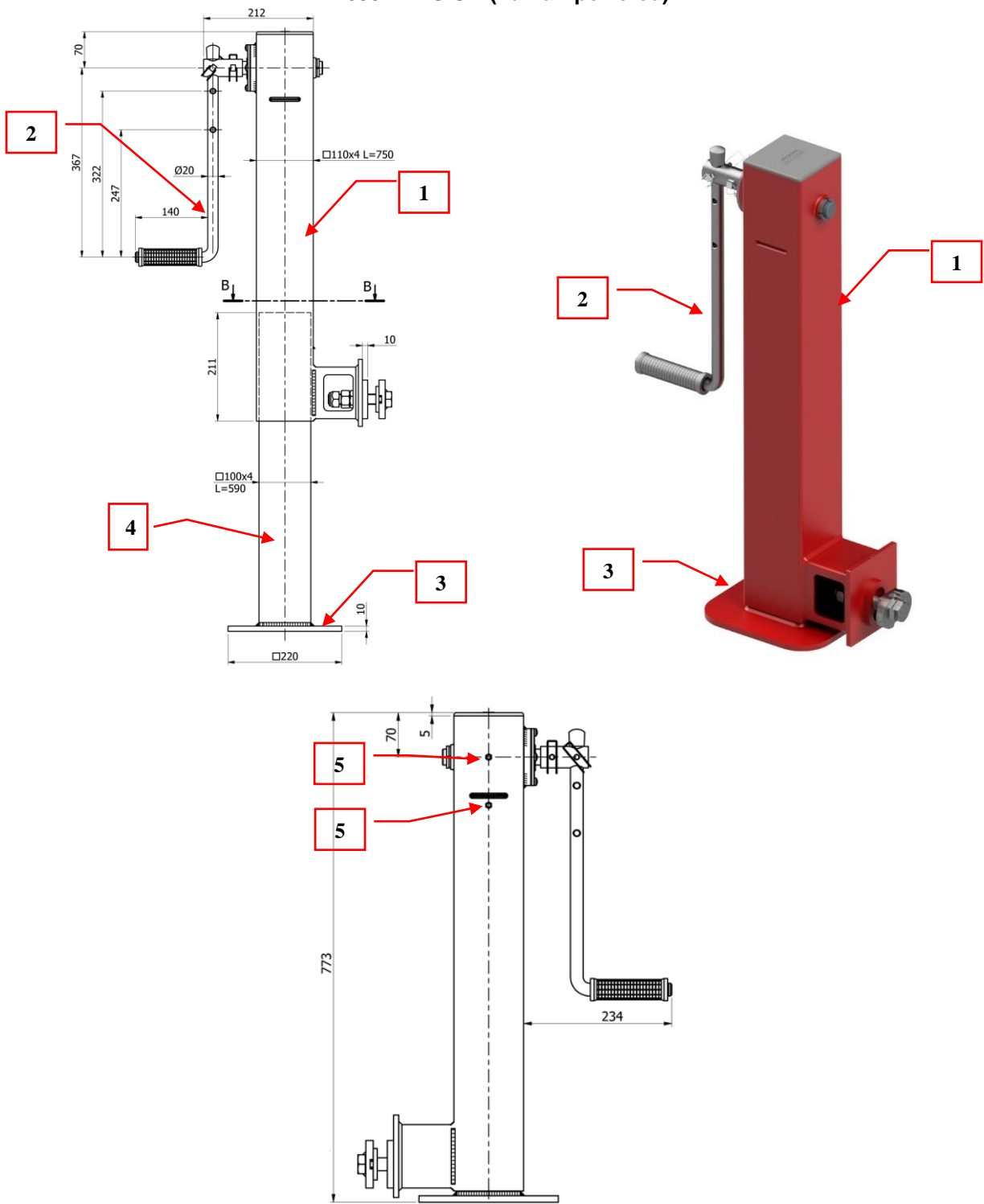
**VERSION DG709 (human-powered)**



**Fig. 3.2:** DG709 version.

Position	Name
1	External pipe (position for warning stickers)
2	Control part for height adjustment
3	Footed base
4	Internal pipe
5	Greaser

**K600 VERSION (human-powered)**



**Fig. 3.3:** K600 version.

Position	Name
1	External pipe (position for warning stickers)
2	Control part for height adjustment
3	Footed base
4	Internal pipe
5	Greaser

## KRA1200 VERSION (human-powered)

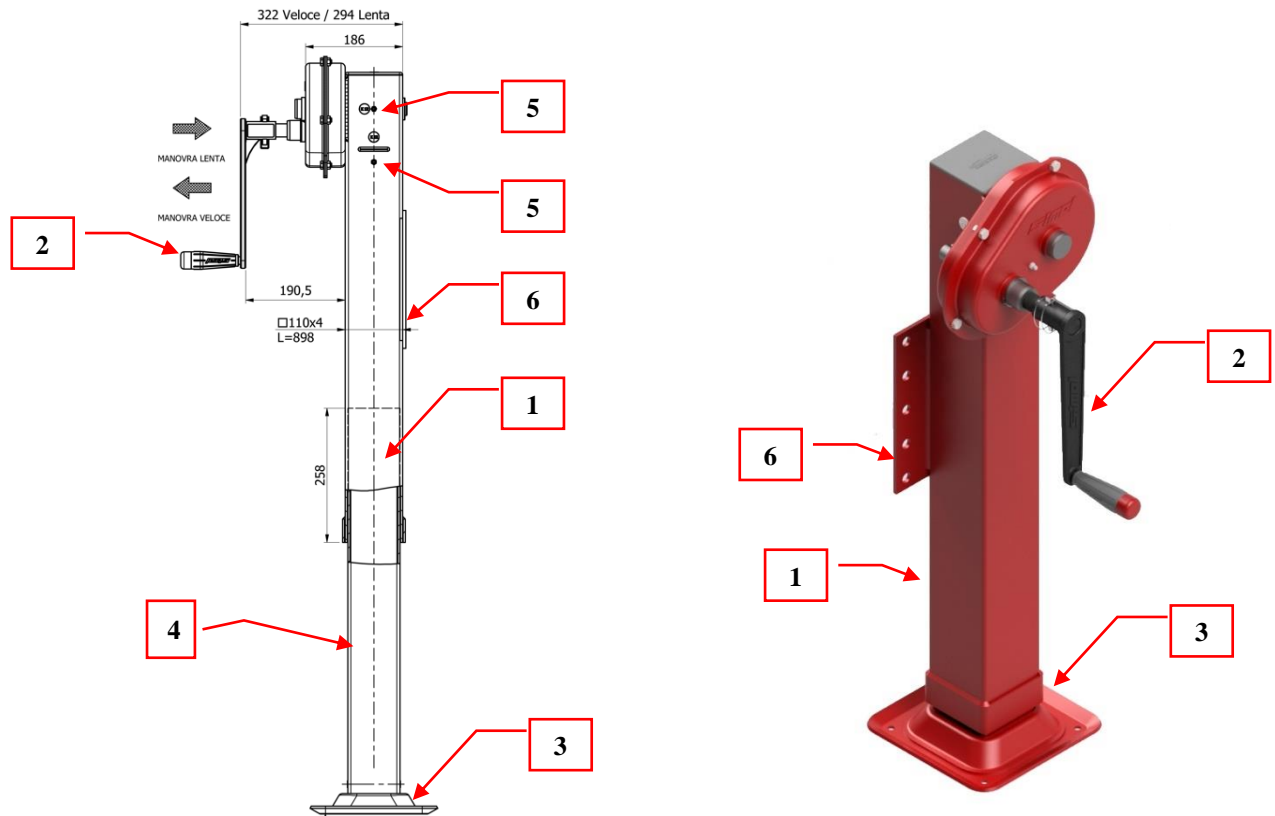


Fig. 3.4: KRA1200 version.

Position	Name
1	External pipe (position for warning stickers)
2	Control part for height adjustment
3	Tilting footed base
4	Internal pipe
5	Greaser
6	Fixing flange

The machinery is fitted with fixed protective housings sized and positioned in compliance with the legislation in force, that prevent the operator from reaching the areas that are sources of danger and that segregate the points that pose the risk of crushing or contact from the hazardous elements, compatibly with the operations that they are carrying out..

All mechanical parts are suited to withstand the vibrations that they are subject to during the production cycle, if well maintained and used for the purposes they were designed for.



**If any doubts arise regarding the composition of the machinery regardless of having carefully and completely read this manual, refer to the drawings; if your doubts persist, seek the department manager.**

### IMPORTANT!

The images are chosen for illustrative purposes only of the entire range of products. The actual model may differ. Before use, check suitability and have it confirmed by a specialised shop.

The machinery can be supplied in standard version with anti-rust paint or standard electrolytic galvanising or in custom version on request.



**Take care when performing manual operations on the machinery.**



### IMPORTANT!

For more information on the various versions of the machinery, contact **Simol S.p.A.**

Possible machine options are listed below.

HUMAN-POWERED MECHANICAL JACKS	
Example photo	Description and function of the version
	<p><b>2 EXTENSIONS</b></p> <p>Safety system with lock on the handle (optional)</p>
	<p><b>3 EXTENSIONS</b></p> <p>Safety system with supporting chain for third extension.</p> <p>Proceed as follows to use this version:</p> <ul style="list-style-type: none"> <li>- hold the handle firm on the base;</li> <li>- turn and pull out the locking pin;</li> <li>- adjust the third extension;</li> <li>- lock the third extension with the locking pin;</li> <li>- make further adjustments with the handle.</li> </ul>
	<p><b>TWO-SPEED</b></p> <p>Push the handle in (natural position) to select slow speed and turn it clockwise.</p> <p>Pull the handle out to select fast speed. Turn the handle anti-clockwise to lower the machinery to the ground. Turn the handle clockwise to raise the machinery from the ground.</p>



	<p><b>TILTING, WITH PIPE OR FLANGE</b></p> <p>In resting position the device is horizontal.</p> <p>After extracting the fixing pin, tilt the device to the vertical position. Lastly, insert the fixing pin.</p>
	<p><b>"ISO CORNER" (ISO 1161 CORNER BLOCKS)</b></p> <p>System designed for lifting and holding containers.</p> <p>The 'iso corner' connection is available with different angles and heights.</p>

Mechanical jacks with human-powered screw movement can be supplied with an upper or side handle.



**ATTENTION:** Do not use the machines in atmospheres where there is a risk of explosion (ATEX atmospheres).

### 3.3 ALLOWED USES AND LIMITS OF OPERATION

The machines manufactured by **Simol S.p.A.** are human-powered devices equipped with a support base and, if necessary, an attachment point to the main equipment to be lifted and supported. They are designed for the support, stabilisation and height adjustment of machinery/equipment of various kinds. The use of machines for purposes other than those intended is considered IMPROPER USE. Using the machines without following the procedures in this manual may result in damage to products or equipment.

When the machines are in operation, it is absolutely forbidden for unauthorised persons to stand near the machines; **only the presence of the operator in a safe position** is allowed.



**Use of the machines for purposes other than those intended could result in injury to persons or damage to the machines themselves and are therefore considered to be INCORRECT USES for which the manufacturer is not responsible.**



**Improper use of the machines also leads to immediate forfeiture of the warranty.**



**Guards may only be removed using suitable tools and may only be carried out by qualified and authorised personnel when the machine is stationary and without power. Tools that enable the removal of guards must not be given to the operator.**



**The machines have parts carefully positioned and fixed during testing by SIMOL technicians.**



**It is absolutely forbidden to remove or modify or tamper with safety devices and guards.**



**The operating temperature range for all models is from - 20°C to + 60°C**

### 3.4 INTENDED USE OF THE MACHINE

Intended use means using the machines in accordance with the information provided in the instructions. The machines may only be used by professional operators who are informed and trained in the contents of this instruction manual. The machines manufactured by **Simol S.p.A.** are human-powered devices equipped with a support base and, if necessary, an attachment point to the main equipment to be lifted and supported. They are designed for the support, stabilisation and height adjustment of machinery/equipment of various kinds. The operators provided for use are responsible for verifying its proper functioning by remaining outside the guards built to protect the danger zones. Access to hazardous areas for operations that are necessary for operation is bound by the access conditions implemented in the safety logic and must be carried out in accordance with the instructions provided in this manual and all related publications.

#### **IMPORTANT!**

**The machines must be installed in accordance with Chapter 5 'Installation' using the permitted and intended connection systems.**

### **3.5 REASONABLY FORESEEABLE MISUSE**

Reasonably foreseeable misuse refers to use of the machines in a manner other than stated in the instructions for use, but that may arise from easily foreseeable human behaviour.

The manufacturer's experience allows the following cases of misuse to be reported in advance:

#### **A) INSTALLATION**

It is considered misuse:

- Installing machines in environments in which an explosive atmosphere remains or is likely to remain for short or long periods during normal operation (classification according to ATEX Directive 2014/34/EU)
- Installing the machines in environments whose characteristics do not comply with the technical environmental data in the instructions
- Installing machines without respecting the manufacturer's instructions
- Installing the machines by welding.

#### **B) USE**

It is considered misuse:

- Use by operators who have not reached the minimum age for starting work stipulated by the laws in force in the respective countries of use
- Use by operators who have not been trained and informed in advance of any risks and residual risks of the machines as well as trained in safety
- Not using personal protective equipment (PPE) as required by the instructions and rules in force in the country of use
- Bypassing machine protection measures even temporarily
- Operating the machines even when they show symptoms of failure or are partially out of order
- Using the machines without complying with the instructions for use and technical data concerning the limits of processing (products, materials, speed, etc.).
- Simultaneous use of the machines by two or more operators who may mutually endanger themselves or other exposed persons
- Using machines beyond the permitted limits.

#### **C) TRAINING AND INFORMING PEOPLE**

It is considered misuse:

- Operating machines without having read and understood the manufacturer's instructions
- Perform operations for which no information has been provided by the manufacturer
- Carrying out operations for which it is difficult to interpret the manufacturer's instructions
- Carrying out operations other than as described in the instructions
- Performing operations expressly forbidden in the instructions.

#### **D) CHANGES**

It is considered misuse:

- Carry out modifications of any kind that vary the intended use of the machines.

## 4.1 SHIPPING TRANSPORT AND RECEPTION OF MACHINERY

**IMPORTANT!**

When the machines are received, check that they are completely intact. Promptly notify **Simol S.p.A.** if they are damaged.

When the machines arrive at the customer site, the following must be ready:

- Enough space for installation;
- The most suitable means for unloading and positioning the parts of the machinery on site.



All of the receiving and unloading operations must be carried out in the presence of a single manager, who is tasked with checking operations, for any missing parts that are crucial to perfect assembly of the partly completed machinery and their damage during transport (all of this with the aid of the delivery note).

**IMPORTANT!**

The single elements are packed on wooden pallets or in wooden crates. This packaging is intended for road transport. **AT THE END OF TRANSPORT AND INSTALLATION OPERATIONS THE PACKAGING MUST BE DISPOSED OF ACCORDING TO THE LAW.**

If the exterior of the packaging is damaged, open it in front of the carrier and check that the machinery has not been damaged.

Describe any discovered damage in the shipping documents and promptly inform **Simol S.p.A.** If the packaging does not show any anomalies, nevertheless perform an external check the devices within 7 days of the delivery date. If there is visible damage due to transport, immediately inform the carrier, the insurance company, as well as **Simol S.p.A.** if the Incoterms® agreed for transport does not include this.

## 4.2 GENERAL WARNINGS



The handling activities described in this paragraph must only be carried out by qualified staff trained specifically to perform package loading and unloading and handling operations safely, using lifting equipment.



Local staff must be familiar with accident prevention rules.

For any handling the machinery or parts of it, it is absolutely necessary to request the intervention of **Simol S.p.A.** The company will not be held liable for damage caused by handling the machinery without their intervention.



**THE WEIGHT OF THE LIFTED LOAD MUST BE TAKEN INTO CONSIDERATION!!!** Check that the stability of the load is not the origin of dangers and/or accidents. When handling packages that are so large that they do not allow sufficient visibility, the assistance of an operator on the ground is necessary.



Make sure that the vehicles and logistic structures are compliant for use and are in perfect operating conditions.



During handling operations, the operators must be equipped with suitable personal protective equipment such as: gloves, footwear, with non-slip sole and work helmet.



To avoid, if any of the machines or components of them fall, any parts from hitting people, make sure that during lifting operations that there are no people within the range of action of the lifted machinery.



Before every movement, always make sure that the lifting equipment with the relative tools, is suitable for lifting the load being handled and check its stability.



Handling is forbidden on unpaved terrain, or on loose or very uneven terrain.

### 4.3 UNPACKING AND LIFTING MACHINES

The machinery is packaged on pallets or specific crates; packages are handled with forklift or pallet truck.



**Use lifting equipment and accessories of suitable capacity for the load being handled; overestimate the weight of the packages being handled to obtain the necessary strength and safety guarantees.**

The size and weight of the machinery, once it is unpacked, is such that it cannot be transported by hand. During handling make sure that the capacity of the lifting equipment is suitable. Before starting handling, check the stability of the components being transported.

In order to guarantee safe handling of the machinery, strictly follow these general indications below:

- a. Transport the packages containing the machinery as close to the place of installation as possible, then proceed with unpacking taking care to check that the contents match the shipping list;
- b. Remove all of the disassembled components and accessory parts. Very carefully clear away all of the material used for the packaging of the machine parts.



The nominal capacity of a forklift is never its actual capacity, which varies based on the height that the operation is carried out at and on the centre of gravity of the load in relation to the back of the forks.

#### **IMPORTANT!**

**The customer is in charge of disposing of the packaging material, and this must be done in compliance with the regulations of the Country where the machinery is installed.**

#### **IMPORTANT!**

**Damage caused by inadequate treatment, failure to observe rules, incorrect handling by untrained staff can never be charged to the manufacturer.**



**BEFORE STARTING HANDLING, CHECK THE STABILITY OF THE COMPONENTS BEING TRANSPORTED AND CLOSE ALL INSTALLED GUARDS.**



**THE WEIGHT OF THE LIFTED LOAD MUST BE TAKEN INTO CONSIDERATION.**



**ALL OF THE LIFTING AND TRANSPORT OPERATIONS NEED TO BE WATCHED AND CONTROLLED BY AUTHORISED STAFF.**

### 4.4 STORAGE AND ENVIRONMENTAL CONDITIONS

In case of prolonged storage, leave the parts of the machinery away from rain and wind and possibly in a dry place. The machines can undergo serious damage if, awaiting installation, they are kept in environments at critical temperatures. Do not expose the machinery to temperatures below 5°C and above 40°C. Do not expose the machinery to a humidity rate below 10% and above 80% (non condensed).

## 5.1 INSTALLATION NOTES



All of the technical specifications of the machinery required for correct installation are provided in this chapter and in the “SPECIFICATIONS” chapter.

Before starting installation operations it is necessary to check the following conditions:

- 1 Make sure that the machinery is perfectly clean;
- 2 Check that there are no objects strewn near the moving parts and work station;
- 3 Check that all safety devices are installed and working correctly;
- 4 Check that the supporting surface is sufficiently consistent to bear the weight;
- 5 Check that the supporting surface is sufficiently flat and does not dip or rise;
- 6 Check that the installation surface is industrial and sufficiently sized, considering additional space necessary for assembly;
- 7 Set up the necessary energy connections.

## 5.2 INDICATIONS FOR ASSEMBLY

These machines are designed and built to be installed on a complete machine or equipment.

Before assembly and use of the machinery/equipment, it is necessary to check the following points, so that the device can operate safely.



**ATTENTION:** Before assembly and disassembly of the machinery/equipment, it needs to be blocked against unexpected movements. Before setting up the connection to the trailer or machinery, check that the connecting or fitting point is clean and intact.



**ATTENTION:** Damage and dirt can have negative effects on correct connection. Check the integrity and completeness of the connecting materials.



**ATTENTION:** In case of damage it is necessary to use original spare parts.



**ATTENTION:** Using unsuitable or faulty tools may cause accidents and injuries.



**ATTENTION:** Assembly must be carried out exclusively by technically qualified staff.

### IMPORTANT!

The machines can only function once they are installed in the final machinery/equipment. The machinery is not built to operate autonomously.

For assembly, proceed as follows:

- 1 Take the machinery out of its packaging on a clean and stable surface;
- 2 Check that the fixing points match up. In case of doubt, consult with an expert
- 3 Carry out the mechanical connection between machines and machinery/equipment to be lifted in accordance with these assembly instructions and the user manual of the final machinery/equipment
- 4 Check that the fixing is set up to professional standard.



**ATTENTION:** Guarantee that there is an adequate distance between the ground and the machines in the retracted position. If the distance is not suitable or it is reduced, the machines can get damaged, also causing accidents and damage to people.



**ATTENTION:** Connections that are not set up correctly can pose a high risk of injury and damage to the environment.

- 5 Secure the machines in the relative retracted position for transportation and extended to support the load



**ATTENTION:** If they are not duly secured, the machinery may move autonomously and cause injury.

- 6 In case of non conformity, immediately implement corrective measures

7 Before starting up the machinery, pull out the cylinder making the piston rod go in and out several times



**ATTENTION:** Touching the moving piston poses a high risk of injury with the possibility of serious contusions and even amputation.

### 5.3 TYPES OF MACHINE FIXING

The attachment of the machines to the final machinery/equipment can take place in the following ways:

- By bolted joints
- By means of perforated fixing tube and bolt
- By means of ISO 1161 (iso corner) block locking system to be validated by the client during incorporation
- By other fastening mechanisms built according to the customer's design, to be validated by the customer during incorporation.

For all fastening methods it is necessary to consider the indications stated in paragraph 5.2 Plus, for the first three fastening methods, additional information is provided in paragraphs 5.3.1, 5.3.2 and 5.3.3. The fastening work must be carried out exclusively by qualified technical staff.

Bolted connection requires the jack to be fitted with a specific flange/interface tube previously welded onto the outer sleeve.

#### 5.3.1 FIXING OF MACHINES BY BOLTED CONNECTIONS

Perform fastening according to the safety warnings of chapter 5.2.

#### **IMPORTANT!**

It is the responsibility of the manufacturer of the final machinery/equipment to choose the cross-sections, quantities and strength class of the screws to be used in the fastening, after determining the loads at the connection points.



**ATTENTION:** An insufficient capacity of the connection fittings can lead to a malfunction of the components, with subsequent elevated danger of incidents.



**ATTENTION:** Exploit all fitting points and only use materials with enough certain original capacity. A reduction of the fixing points and the use of materials of unknown origin can cause a malfunction of the junction points.



Tighten the threaded fittings with a torque wrench.



Observe the torque values provided below.



Check that the connection is compliant with the requirements.

Torque values:

Nominal thread diameter	Resistance class of the connecting elements	
	8.8	10.9
M8	25 Nm	35 Nm
M10	50 Nm	70 Nm
M12	85 Nm	119 Nm
M14	135 Nm	190 Nm
M16	212 Nm	298 Nm
M18	290 Nm	402 Nm



**ATTENTION:** Failure to observe the required torque values can lead to a malfunction of the fastening and a high incident hazard.



**ATTENTION:** The values given in the torque table above are for guidance only and correspond to 80% of the material fatigue phenomenon. The torque values must be calculated arithmetically.

### 5.3.2 MACHINE FIXING BY MEANS OF PERFORATED FIXING TUBE AND LATCH

Perform fastening according to the safety warnings of chapter 5.2.

Specifically, act as follows:

- 1 Pull the bolt out of the hole on the male pipe (pipe connected to the machine).
- 2 Place male hose on female hose (hose connected to the machinery/equipment to be lifted/supported)
- 3 Insert the locking bolt into the hole provided



**ATTENTION:** Ensure correct insertion of the latch. Do not use the machine if the latch is not properly engaged.

### 5.3.3 MACHINE FIXING BY MEANS OF ISO 1161 CORNER BLOCK LOCKING SYSTEM

Machines equipped with a manually operated clamping system for ISO 1161 corner blocks (iso corner) must be used in a minimum number of 4 per set-up. The use of less than 4 can jeopardise the integrity of the machines, the machinery/equipment that must incorporate them as well as the safety of the operators.

Perform fastening according to the safety warnings of chapter 5.2.



**ATTENTION:** Exploit all fitting points and only use materials with enough certain original capacity. A reduction of the fixing points and the use of materials of unknown origin can cause a malfunction of the junction points.



**ATTENTION:** Tighten the 2 nuts provided already screwed to the pin to a torque of 100 Nm to 150 Nm using a 30 mm fork spanner



**ATTENTION:** Observe the tightening torque given above, if necessary by checking it with a torque spanner. Failure to observe the required torque values can lead to a malfunction of the fastening and a high incident hazard.

The machines must be attached to the ISO 1161 angle block by centring the oval ring to one of the oval holes provided on the angle block, taking care to orient the pin so that it matches the hole in the block. Turn the pin 90° so that the block itself is 'engaged' and, after locking it by moving it towards the machine body, tighten the 2 nuts as specified above.

Repeat the operation for all four machines.

**In this situation, the four machines are firmly attached to the machinery/equipment and therefore, being incorporated into it, levelling or lifting is possible.**



**ATTENTION:** It is necessary to lift by acting on all 4 devices at the same time.



**ATTENTION:** If levelling is required, proceed with at least 2 devices at a time, in small steps and/or alternately on each device (max. 20 mm per device).





When using the machines, it is the worker's obligation to observe the instructions in the operating and maintenance manual. Damage caused by inadequate treatment, failure to observe rules, incorrect handling by untrained staff can never be charged to the manufacturer.



Before activating the machines, secure the machinery/equipment (to which the machines are connected) from unintended start-up or slippage.



Only use the machinery on a flat surface and with suitable capacity. Sinking can make it lose stability and cause the equipment to overturn.



Only place the machinery under the allowed loads. An overload can cause malfunction.



Only move or tow machinery/equipment when the machines are in their rest position (retracted).



Do not try to make height adjustments with loads exceeding the effective lifting capacity of the machinery.

## 6.1 USE OF MACHINES

Height adjustment can be done manually by turning the crank.

For some versions of the machinery, the height is adjusted initially by turning the device or through a preliminary adjustment to lower the device by moving the relative fixing pin.



Never place parts of the body or objects in the handling areas and under the machinery. The moving parts pose the danger of injury.



After making the preliminary adjustment, it is possible to reinsert the fixing pin and lock it to prevent it from escaping (only for 3-extension devices).



The load capacity of the machines can be found on the individual CE plates supplied with the machines. Before using the machines, ensure that the weight to be lifted does not exceed the maximum permissible load capacity.

### Mechanical height adjustment (in the case of human-powered jacks):

- Turn the crank to raise or lower the machinery.

To handle large loads it is possible to use the machinery with two-speed reducers:

- The fast speed makes it possible to quickly achieve the required extension and must only be used in no-load conditions;
- The slow speed allows load adjustment, but requires more effort on the handle.

### 7.1 GENERAL NOTES ON SAFETY RULES



After every maintenance task it is always necessary to re-install and re-start any protections that were removed or disabled to perform the intervention.  
Only use original spare parts and tools suitable for the purpose, and in good conditions.

### 7.2 CLEANING

The machinery can be cleaned by staff without any specific technical skills, but who are correctly trained on the use of the main power disconnecting controls and who know the main features of the machinery to avoid causing dangerous situations.



Always perform cleaning with the power supplies shut off. Wear the necessary personal protective equipment (gloves, overalls, non-slip shoes).  
Prolonged contact with oils or lubricants on the skin can cause irritation. Strictly follow the personal hygiene and work rules.

#### GENERAL CLEANING OF MACHINES:

- Clean the exterior of the machinery with soft cloths moistened with detergent;
- Remove traces of dust and other dirt from the machinery;
- Dust on the precision parts of the machinery prevents proper operation. Clean the machinery before and after operation;
- Keep the work area clear of any material that could obstruct the workers' tasks;
- Keep the surrounding areas clean; especially of oils and greases or other materials that could make the floor slippery.

#### IMPORTANT!

Built up dirt and dust compromise the good operation of the machinery. All gaps must be clean.

### 7.3 ROUTINE MAINTENANCE

Maintenance of the machinery must be carried out by highly specialised staff with extensive knowledge it.

**ATTENTION:** this chapter is intended exclusively for the **QUALIFIED TECHNICIAN (MAINTENANCE TECHNICIAN)**.

Prolonged contact with lubricant oils on the skin can cause irritation. Strictly follow the personal hygiene and work rules.

#### IMPORTANT!

The worker is required to use personal protective equipment to perform the maintenance and cleaning operations of the machinery in full safety.

Be reminded that before performing any maintenance on the machinery or parts of it, it is necessary:



- In case of failure or poor operation of the machinery, stop it and display a warning sign on it, as shown here.
- Operate machines in rest position.
- Be careful of the control tools; replace them when they are damaged.
- Perform all of the maintenance or repair operations under the responsibility of a single person appointed by the employer.
- During maintenance operations the machinery must be completely disconnected from power sources.

## ROUTINE MAINTENANCE CHECKS

Every day visually check the general conditions of wear of the machines; this check must be carried out to prevent any breakdowns or malfunctions due to conditions of use relating to the environment, for example, use in a steam-filled room, or in particularly hot climates, etc. The indicated frequency refers to normal operating conditions, different frequency is required in particularly severe conditions.

Upon first use and at least once a year, it is necessary to have qualified staff check the device. These checks must be duly documented.

Before each use, the operator must check that the machinery does not show any damage or signs of wear. In particular, it is necessary to check that the connecting and locking parts are well-secured and functioning.

### DAILY CHECKS:

- Check that all safety and protection devices are installed and functioning;
- Check that all controls on the machinery are working correctly.

### MONTHLY CHECKS:

- Check the state of wear of the components; if necessary, ask for them to be replaced; the deterioration of any part can be a symptom of poor operation.

### SIX-MONTH CHECKS:

- Check the general condition of the main machine parts, as well as a check on material degradation and wear.

### ANNUAL CHECKS:

- Inspect the main components of the machinery;
- Run a check on the safety systems of the machinery;
- Perform a complete extension of the machinery;
- Lubricate the machines through the greasing point provided.



**Failure to observe the maintenance instructions may cause serious accidents and compromise the use of the machinery.**

The moving parts, suitable for regular use, such as bearings, wheels, gears, screws and female threads, need to be greased.

During normal use, observe the following.

Lubrication point	Before stop	After stop	After 20 hours of operation at most
Greasing points (see Chapter 5.2)	Molybdenum disulphide grease		

**ATTENTION:** For any special maintenance task, seek specialised staff.

**ATTENTION:** Prolonged contact with grease on the skin can cause irritation. Strictly follow the personal hygiene and work rules.

**ATTENTION:** This chapter is intended exclusively for the **QUALIFIED TECHNICIAN (MAINTENANCE TECHNICIAN)**.

**IMPORTANT!**

The worker is required to use personal protective equipment to perform the maintenance operations of the machinery in full safety.

Routine maintenance operations are covered in the previous chapter; if any problems arise, you are required to contact **Simol S.p.A.**

## 8.1 FAULT-FINDING

Fault / Non conformity	Cause of the fault	Solution to the fault
The mechanical device for height adjustment is not moving.	The protective device is not locked.	Unlock the locking device in observance of the safety warnings.
	Excessive load.	With two-speed reducer, change the gear and check the static load.
		With single speed check and correct the static load.
The adjustment system is not moving due to soiling and oxidation.	Clean the adjustment and lubrication system according to the maintenance plan.	

### 9.1. SPARE PARTS LIST

The spare parts catalogue allows you to find the part number of a machine component that needs to be replaced.

**IMPORTANT!**

Always fit original parts.

**IMPORTANT!**

The installation, and consequent malfunctioning, of mechanical parts that are not the manufacturer's property will result in the forfeiture of the warranty and free service contract for the duration of the warranty period.

**PLEASE REFER TO THE MANUFACTURER'S SPARE PARTS TABLES FOR DETAILED INFORMATION.**

### 9.2. ORDERING SPARE PARTS

The customer assistance service is managed directly by the manufacturer, therefore, in case of need it is necessary to contact them through their mailing address, e-mail, telephone, fax stated below:

**Simol S.p.A.**  
Switchboard  
E-mail

**Via Fiocchetti n.14 - 42045 Codisotto di Luzzara (RE) - Italy**  
**Tel. +39 0522 976728**  
[customercare@simol.com](mailto:customercare@simol.com)

### 10.1. DEMOLITION AND DISPOSAL

At the end of the life cycle, the user company must dispose of the machinery in observance of the regulations in force, firstly emptying the lubricant fluids and general cleaning of the various elements and then separating the parts that make-up the equipment. After taking apart the machinery, separate the various materials in accordance with the regulations of the country where the equipment is being disposed of. The equipment does not contain hazardous components or substances that require special removal procedures.

**ATTENTION:** When handling waste it is necessary to be equipped with personal protective equipment.

The disposal of waste generated by the demolition of equipment must be carried out in respect of the environment, without polluting the soil, air and water. In any case, local regulations in force must be observed. Remember that waste is intended as any substance or object that the holder must dispose of or is required to dispose of (L.D. L152/2006). Waste generated by demolition of the equipment is classifiable as special waste.

These are special non-hazardous wastes that can be recovered, pursuant to Legislative Decree 152/2006. As for elimination, it is necessary to bear in mind that the materials that make-up the equipment are not hazardous.

**ATTENTION:** During the disposal process it will be necessary to follow the regulations in force in the country. Only store polluting materials such as oils and solvents in metal drums. Consumables: As for the disposal of consumables, observe the following rules: Batteries: Batteries must be replaced by an electrical maintenance technician. Used batteries must not be disposed of with urban waste, but must be handed over to special disposal centres. Gear oil: Spent oils, oily residues and objects soaked with oil must be disposed of through special collection points, and not disposed of through urban waste channels.

### 10.2. INDICATIONS FOR SUITABLE WASTE TREATMENT

Special waste is managed correctly:

- Through storage in suitable places, without mixing with hazardous with non-hazardous waste.
- By making sure that transportation and disposal/recovery of waste is carried out by authorised carriers and recipients.

through the transportation of waste to authorised collection centres allowed exclusively by members of the Environmental Manager Register.

### 10.3. WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)



With Legislative Decree No. 151 of 25 July 2005, the Italian government implemented the European Parliament directives on the disposal of waste electrical and electronic equipment (WEEE) (Directive 2002/95/EC and 2003/108/EC). Measurements: In particular, this decree establishes measures and procedures aimed at:

- a) preventing the production of WEEE;
- b) promoting the re-use, the recycling and other forms of recovery of WEEE, so as to reduce the quantity sent to disposal;
- c) improving, in environmental terms, the intervention of subjects who participate in the life cycle of this equipment (the producers, the distributors, the consumers and the operators directly

involved in WEEE treatment);

- d) reducing the use of hazardous substances in electrical and electronic equipment.

The decree imposes the restriction and elimination of some substances contained in WEEE: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls and polybrominated diphenyl ethers. The equipment is designed and built in compliance with this directive. Follow the indications set forth below. This symbol, depicting a crossed out wheelie bin, represents the separate waste collection of waste electrical and electronic equipment. The user of this equipment can contact the collection centres provided by the Municipalities or directly by **Simol S.p.A.** or ask for it to be picked up by the dealer, for correct disposal.

DRAWINGS

SPARE PARTS TABLES