GASCO GROUP
Feeding Systems Specialists

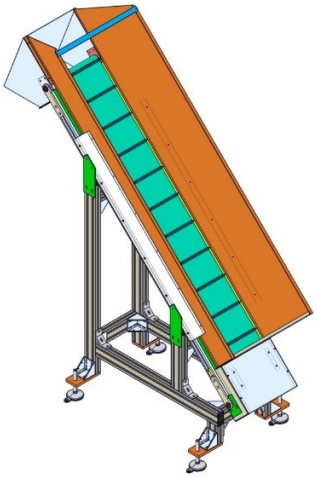
SISTEMI DI ALIMENTAZIONE PER L'AUTOMAZIONE

BELT ELEVATORS

Mod. CAR-25 CAR-50 CAR-75 CAR-100 CAR-150

Use and Maintenance Instruction Manual

ORIGINAL INSTRUCTIONS



This manual applies to the following models: CAR-25 / CAR-50 / CAR-75 / CAR-100 / CAR-150

GASCO GROUP
Feeding Systems Specialists

Original title: Manuale di istruzione uso e manutenzione di: CARICATORE A NASTRO
Original title translation: Use and Maintenance Instruction Manual of: BELT ELEVATORS

INSTRUCTIONS FOR USE
BELT ELEVATORS

Mod. CAR-25 CAR-50 CAR-75 CAR-100 CAR-150

GASCO GROUP
Feeding Systems Specialists

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INDEX

1 INTRODUCTION

This manual is intended for an easy and quick access by users to all information necessary for the equipment use and maintenance.

The operator shall carefully read it in full, making sure that any information included is understood, before conducting any activity connected to the partly completed machinery.

The manual shall also be used as reference document whenever a specific procedure or activity needs to be remembered.
Therefore, it must be made available, at all times, to the staff in charge of maintenance and to operators, for reference purposes, when needed.

	This symbol indicates compulsory reference to the use and maintenance instruction manual. **Whenever this symbol is displayed, operators shall check the manual supplied with the equipment before carrying out activities which may involve the use of the partly completed machinery.**

Gasco group Srl reserves its right to modify the project, make changes / improvements to the partly completed machinery together with updates of the instruction manual without notice to its customers and without obligations with regards to the delivery of possible updated versions.

1.1 MANUAL SYMBOLS

Within the manual the following texts and symbols will be displayed to highlight important advice, warnings and prohibitions:

This symbol is used to highlight particularly relevant technical information which cannot be neglected.
It is essential to follow the information displayed next to it.

This symbol indicates important hazard warnings, which are paramount for the safety of the partly completed machinery and operators.
Carefully read the information displayed next to this symbol and acknowledge relevant hazard.

This symbol indicates that certain actions and/or operations with the partly completed machinery are forbidden as these might threaten the safety of the partly completed machinery and of the operators.
Carefully read the information displayed next to this symbol and follow relevant prohibition.

1.2 TESTING, WARRANTY AND RESPONSIBILITY

Testing

Each partly completed machinery is delivered to our customers ready for installation, after having passed all trials and testing established by the producer and according to what provided for by relevant legislation in force.

Warranty

(Feeding and automation equipment produced by the Company Gasco group S.r.l.).
Gasco group S.r.l. guarantees its products and relevant accessories from material defect or manufacturing fault for 12 months from the date of shipping. With regards to such guarantee, Gasco group agrees to repair or replace those parts which shall be acknowledged as faulty. Repairs shall be carried out solely at the factory and the goods return will be at care and expense of the customer together with the reporting the fault encountered. All costs incurred in for the disassembly and reassembly of the part to be repaired or replaced, together with packaging and shipping costs, are for the customer to bear. The guarantee does not include deficiencies or defects due to the normal wear and tear and/or to an improper use of the goods. For a regular operation of the equipment, the instructions supplied with the material must be strictly followed , as any damage due to an improper use shall not be included in the guarantee.
Gasco group Srl defines its responsibility as solely referring to its product, thus excluding any direct or indirect damage, in particular when above mentioned equipment is used incorrectly or in contrast to what provided for by the instructions. Any alteration or change in the equipment, carried out without prior authorisation by Gasco group Srl, will result in the loss of warranty rights. Possible variations applied to the equipment by Gasco group Srl after the date of delivery, might be covered by guarantee, solely with regards to the variation, and without affecting the expiry date of the guarantee concerning the main equipment. The guarantee shall be considered as void in case the customer fails to report any fault encountered within 8 days from the date of its acknowledgment. With reference to parts purchased by Gasco Group from third parties, the conditions of the guarantee established by relevant manufacturers are automatically transferred to the customer. In any event the guarantee is provided solely if the payment terms and conditions of the equipment are fulfilled.

1.3 DEFINITIONS AND GLOSSARY

Hazard area	Each area within and/or in proximity to the partly completed machinery, where the presence of people exposed might result in risks to the personnel safety and/or health.
Exposed person	Anyone who might happen to be in the whole, or part of, the hazard area.
Operator	Person in charge of installing, operating, adjusting, performing maintenance operations on, cleaning, repairing, transporting the equipment and all necessary activities for its correct use. The different operators shall be appointed according to the different operator qualifications.
Operator qualification	Minimum skill and knowledge level which the operator must have to be able to properly operate on the partly completed machinery.
Number of operators	Sufficient number of operators required to perform correct work activities with the partly completed machinery. A different number of operators, therefore, might not allow to achieve the objective or result in hazards for the personnel involved in the operations
Safety components	Specific component designed by the producer and sold separately from the partly completed machinery to perform safety functions. Any mechanism whose failure might jeopardize the safety of the exposed persons, shall be considered as a safety component.
Safety stickers - Pictograms	Signs, symbols and messages displayed on the partly completed machinery, next to areas where hazards, important prohibitions, advice and warnings need to be reported.
Assembly	A combination of parts or groups of the partly completed machinery bound to each other for transportation purposes.
Electrical	Partly completed machinery or electrically powered device.
Hydraulic	Partly completed machinery or device powered by pressurised oil.
Pneumatic	Partly completed machinery or device powered by compressed air.

1.4 OPERATORS CLASSIFICATION

Operators must, at all times, be aware of the hazard and warning signs and be able to operate autonomously.
Each operator will solely perform the tasks established, based on skills, training, qualifications and authorisations granted.
Operators are classified according to what stated below:

OPERATOR ATTENDANT C1 Level	Non-qualified personnel, lacking therefore specific skills, capable of operating the partly completed machinery by means of the controls located on the control panel and perform simple start or production resumption operations following possible stoppage. **This operator is not allowed to perform activities within the hazard area.**
OPERATOR ATTENDANT C2 Level	Non-qualified personnel, lacking therefore specific skills, capable of performing the tasks relating to level **C1**, and simple operations involving the partly completed machinery, such as its cleaning and basic adjusting functions. **This operator is not allowed to perform activities involving electrical or mechanical parts.**
MECHANICAL MAINTENANCE TECHNICIAN M1 Level	Qualified technician capable of operating the partly completed machinery in normal conditions, to perform change of format, intervene on mechanical parts to perform all necessary adjustments, maintenance operations and repairs. **This operator is not allowed to perform activities on live electrical systems.**
ELECTRICAL MAINTENANCE TECHNICIAN M2 Level	Qualified technician capable of operating the partly completed machinery in normal conditions, in charge of all electrical activities concerning adjustment, maintenance and repairs. This technician may also test the partly completed machinery working cycle by means of the control box. **He cannot intervene on mechanical parts.** **Only this technician can operate in case of energised electrical cabinets and junction boxes**.
GASCO GROUP TECHNICIAN M3 Level	Qualified technician appointed by **Gasco group s.r.l.** or by its agents to perform complex operations including installation and commissioning.
EXTERNAL TECHNICIAN M1 or M2 Level	Qualified technician appointed by the manufacturer or dealer of complex commercial components, capable of performing alterations, repairs or replacements. **Any technician appointed by the company operating the partly completed machinery, the employer and the appointed installation company must verify the compliance to all safety requirements after any kind of intervention and alteration prior to using the partly completed machinery.**

2 GENERAL FEATURES

2.1 MANUFACTURER DETAILS

GASCO group s.r.l.

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Phone +39 019 886188 (rollover) - gasco@gascogroup.it

2.2 DECLARATION OF INCORPORATION

The image below displays a facsimile of the declaration of incorporation.

Gasco group Srl

SISTEMI D[illegible] NE PER L'AU[illegible]

FAC-SIMILE

DICHIARAZIONE DI INCORPORAZIONE
(All. IIb Dir. 2006/42/CE)

IL FABBRICANTE

GASCO group s.r.l.
Azienda / Company

Via Alla Costa 18 | 17047 | SV
Indirizzo / Address | *Cap / Zip* | *Provincia / Province*

Vado Ligure | Italia / Italy
Città / City | *Nazione / Nation*

Tel. + 39 019886188 / fax + 39 019886187
Numero di telefono - Fax / Telephone number - Fax

www.gascogroup.it - e-mail: commerciale@gascogroup.it
Sito web - E-mail / Web site - E-mail

sotto la propria esclusiva responsabilità,
DICHIARA CHE LA QUASI MACCHINA

- Denominata SISTEMA DI ALIMENTAZIONE VIBRANTE;
- Descrizione Prodotto da orientare ;
- Matricola _____;
- Anno _____;

Rispetta i seguenti requisiti essenziali applicati:
1; 1.1; 1.1.1; 1.1.2; 1.1.3; 1.1.5; 1.3; 1.3.1; 1.3.2; 1.3.4; 1.4; 1.4.1; 1.4.2; 1.4.2.1; 1.5; 1.5.4; 1.5.9; 1.5.10; 1.6; 1.6.1; 1.6.5; 1.7; 1.7.1; 1.7.1.1; 1.7.2; 1.7.4; 1.7.4.1; 1.7.4.2

La documentazione tecnica pertinente è stata compilata in conformità dell'allegato VII B della Direttiva 2006/42/CE, e il fabbricante si impegna a trasmettere, in risposta a una richiesta adeguatamente motivata delle autorità nazionali, informazioni pertinenti sulla quasi-macchina.

VIETA

la messa in servizio finché la macchina finale in cui deve essere incorporata non sia stata dichiarata conforme, se del caso, alle disposizioni della Direttiva 2006/42/CE.

La persona giuridica autorizzata a costituire la documentazione tecnica pertinente è: GASCO GROUP Srl, con sede a Vado Ligure (SV), Via alla Costa, 18, Italia.

Luogo e data del documento / Place and date of document

Vado Ligure,_____

Il Fabbricante / The Manufacturer: GASCO group s.r.l.

Nominativo firmatario / Signatory Name: Ing. Adriano Rosso

Qualifica / qualification: Amministratore delegato

Firma / Signature:

2.3 GENERAL INFORMATION

The partly completed machinery object of this manual allows an easy displacement of materials from one point to another. Actuated by a gearmotor and equipped with a discharge hopper, by means of a vertical belt, it allows the incoming material to proceed to the following processing stages.

The use of the partly completed machinery for non-compliant purposes or different from the ones included in this manual may result in unpredictable damage to the machinery and risks for the operators involved in its use.

2.4 DESCRIPTION OF THE PARTLY COMPLETED MACHINERY

Motorised belt elevators are used to bulk feed different kinds of parts, even those subject to tangling. They are generally used to load orienting feeders.
In their regular use, during the work cycle, operators should not intervene, except for the external supervision with regards to the proper functioning of the partly completed machinery.

BELT ELEVATORS can be positioned with an inclination ranging from 0° to 45° according to different production requirements.
According to the different supports, the partly completed machinery is available in three different versions:

- P version on PLATE;
- S version on SUPPORT;
- R version on WHEELS.

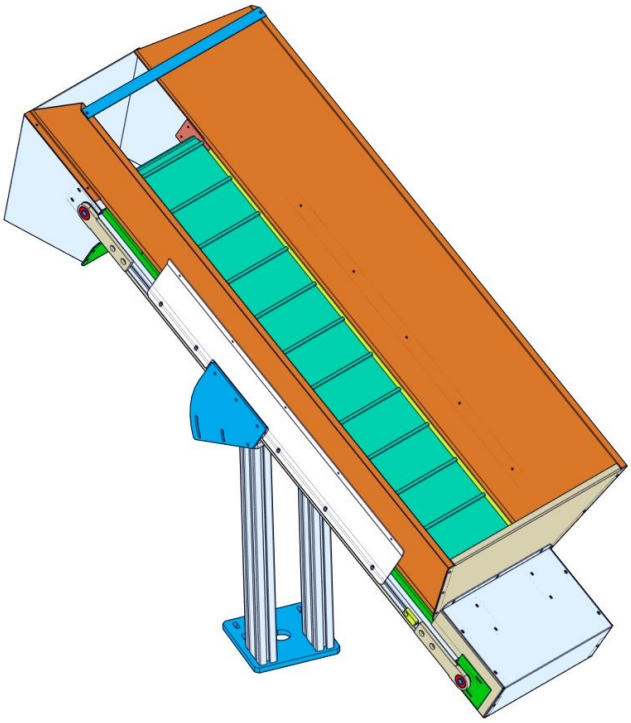
In addition, both bench and ground loaders, can be produced with the following variants:

- The centre-to-centre distance and size of the belt beams (8/12/20 mm) may vary according to the different applications;
- The capacity of discharge hoppers can vary according to requirements;
- The motor can be positioned on the right or left depending on overall dimension;
- Both the tank cover and the lexan loading door with relevant sensor might be included or not;
- The ground structure can be equipped with adjustable feet or wheels according to different requirements.

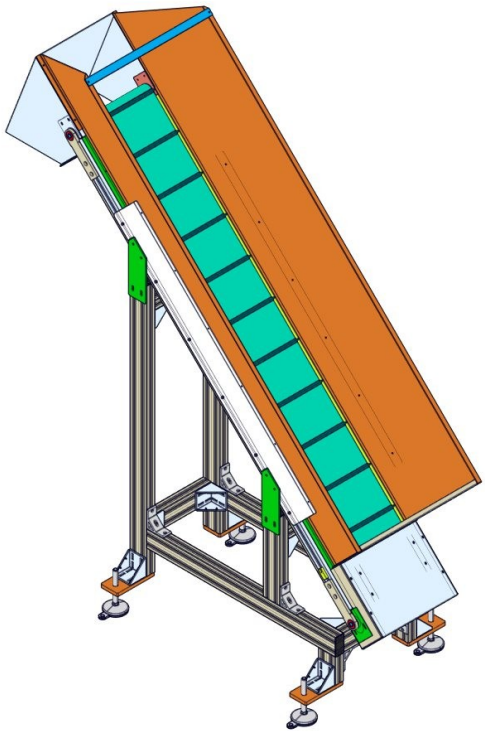
2.5 DRAWINGS

Following are the BELT ELEVATOR representation drawings, in the three versions mentioned above:

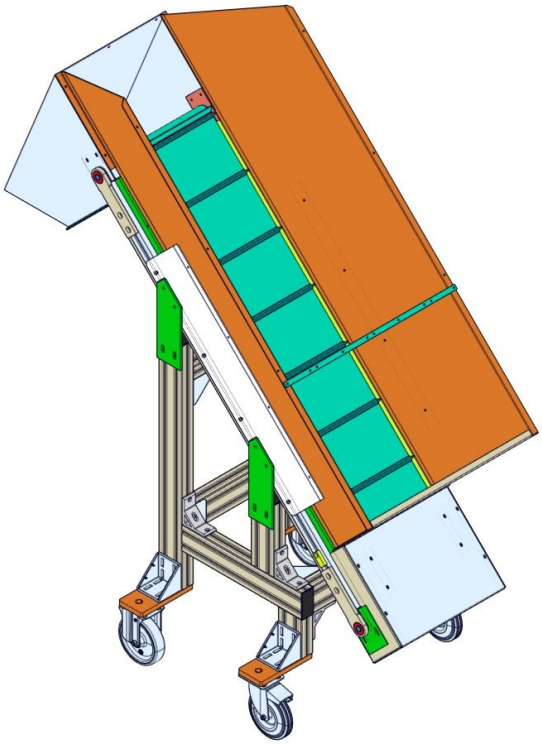
- On plate (P);
- On support (S);
- On wheels (R).



Version on plate



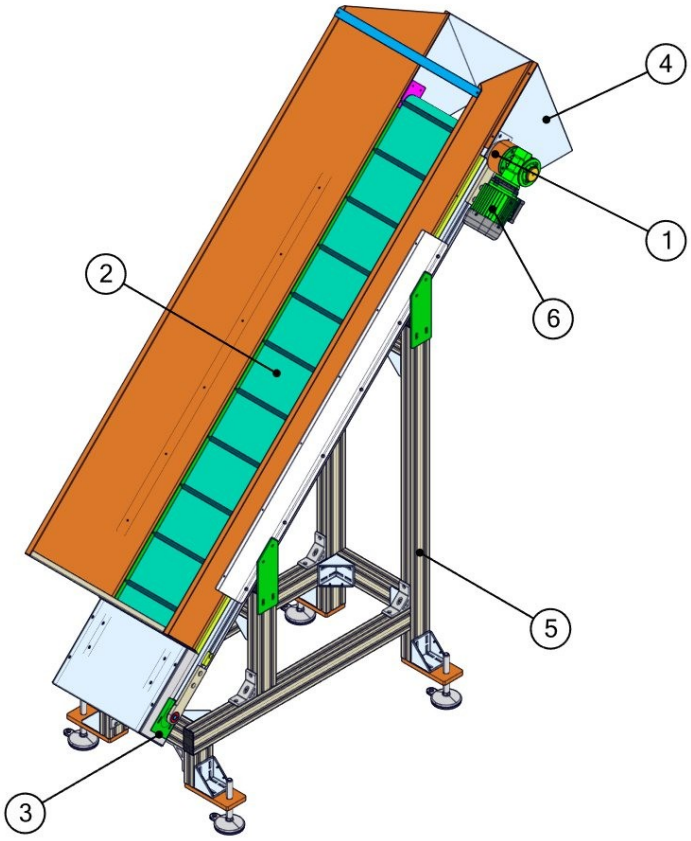
Version on support



Version on wheels

2.6 DIAGRAMS

The BELT ELEVATOR facilitates the transfer of materials from top to bottom, by means of a conveyer belt up to the discharge hopper.

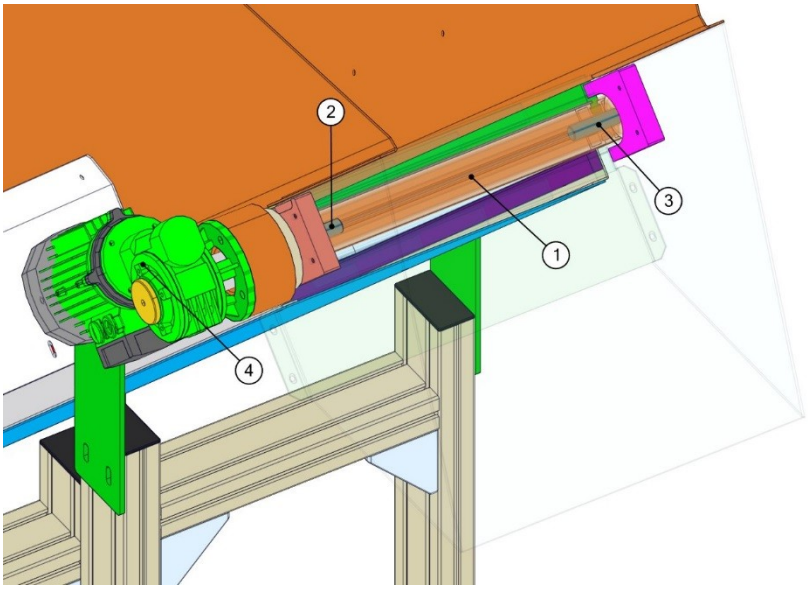


Representation drawing of belt elevator components.

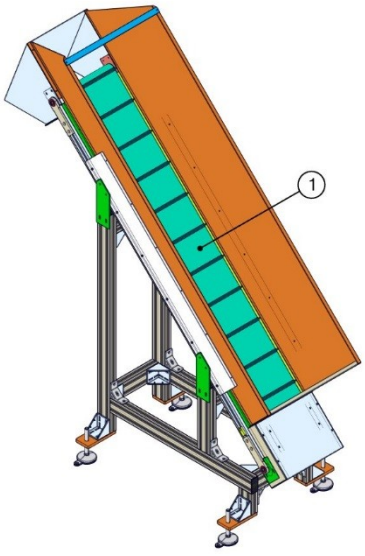
The belt elevator consists in the following main elements:

1. Drive plate
2. Cleated belt
3. Return plate
4. Discharge hopper
5. Frame
6. Engine

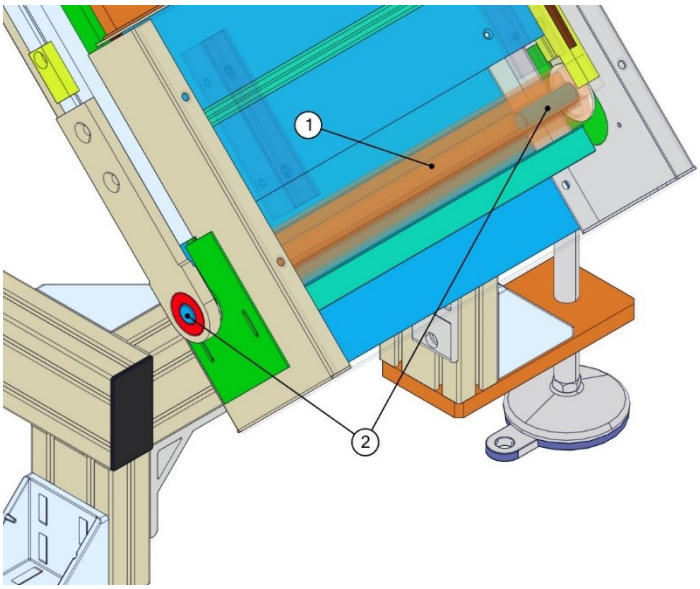
1) **DRIVE PLATE:** it is the group conveying motion to the belt. The drive plate consists in a steel driving roll (**1**), a drive pin (**2**), a Sicomat return pin (**3**) and in the engine with gearmotor (**4**) and relevant transmission gear; such elements allow the belt movement.



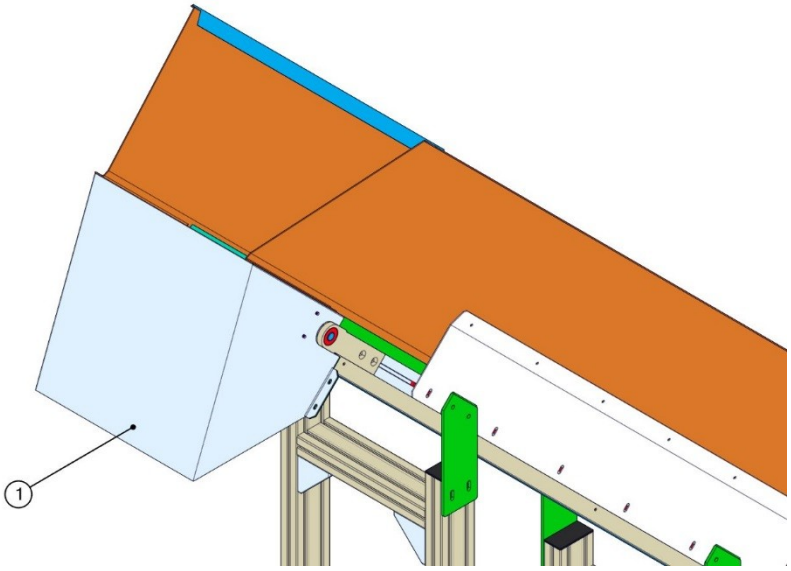
2) **CLEATED BELT:** the partly completed machinery can be equipped with a PVC cleated belt (**1**), with profiles available in three different heights (8/10/20 mm).



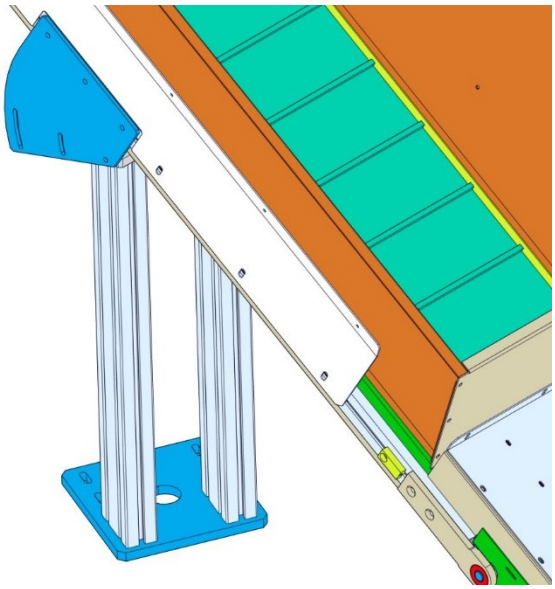
3) RETURN PLATE: it is the group in charge of the movement of the belt mounted at the opposite side of the driving plate. The return plate includes a return roll (**1**) equipped with relevant pins (**2**).



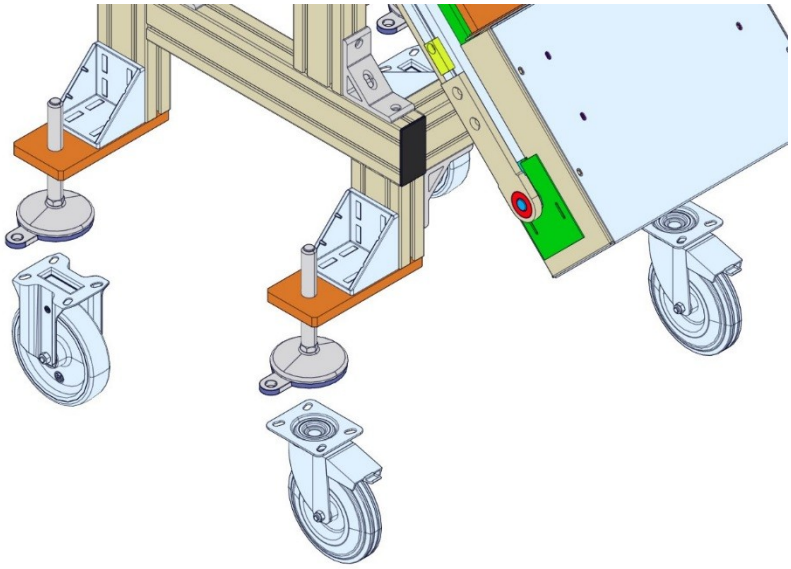
4) DISCHARGE HOPPER: the partly completed machinery is equipped with suitable INOX AISI 304 discharge hopper. (**1**)



5) FRAME: according to the different models, the belt elevator can be equipped with frame and bench fixing plate or wheels/feet for ground positioning.

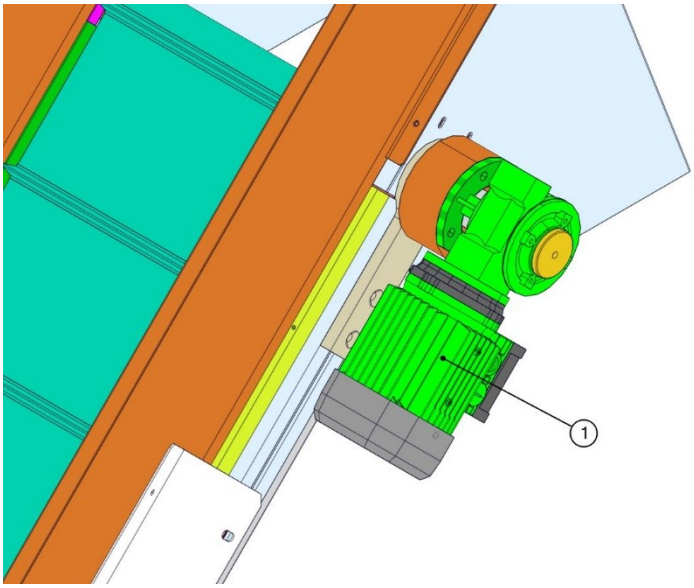


Bench model



Ground model variants

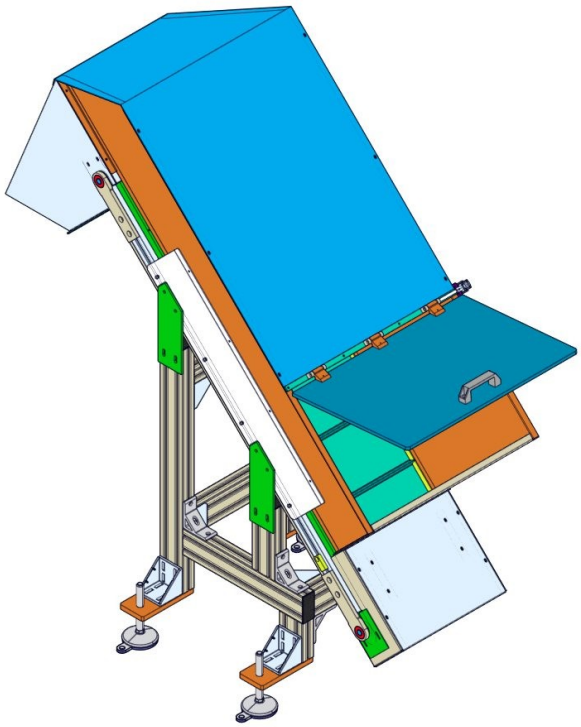
6) **ENGINE:** in the standard version, the belt elevator engine (**1**) includes the Bonfiglioli MVF44P63B14 i=1/60 gearmotor with a BN63B4 B14 0.18Kw engine. Based on requirements, the gearmotor can be located on the right or on the left.



3 OPTIONAL

3.1 TANK INOX COVERING

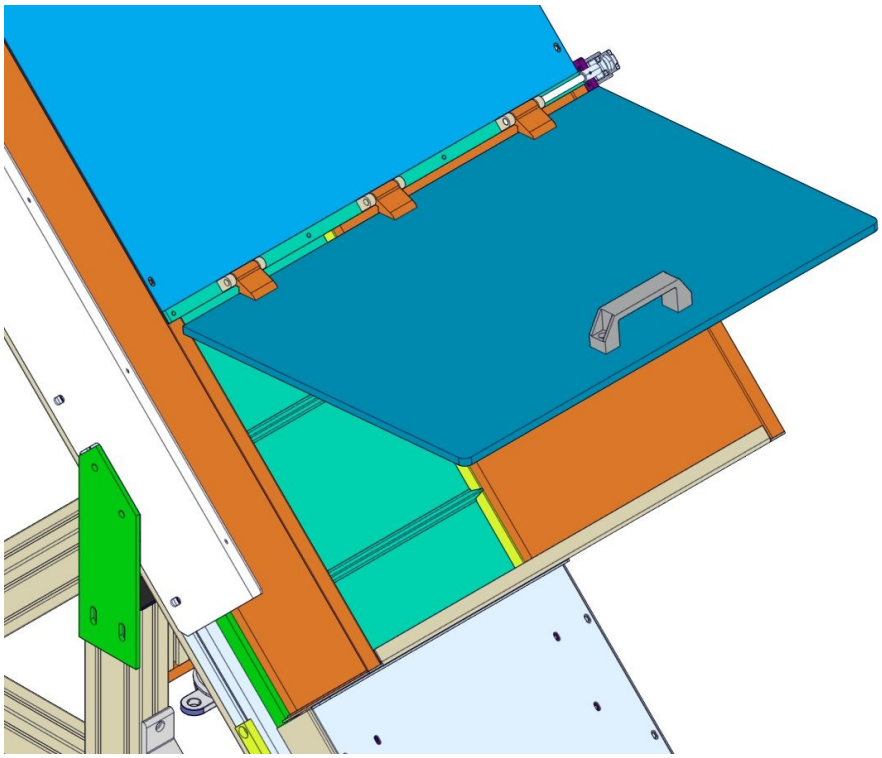
It is possible to supply the elevator tank with relevant INOX AISI 304 cover.



Version equipped with INOX cover

3.2 LOADING DOOR

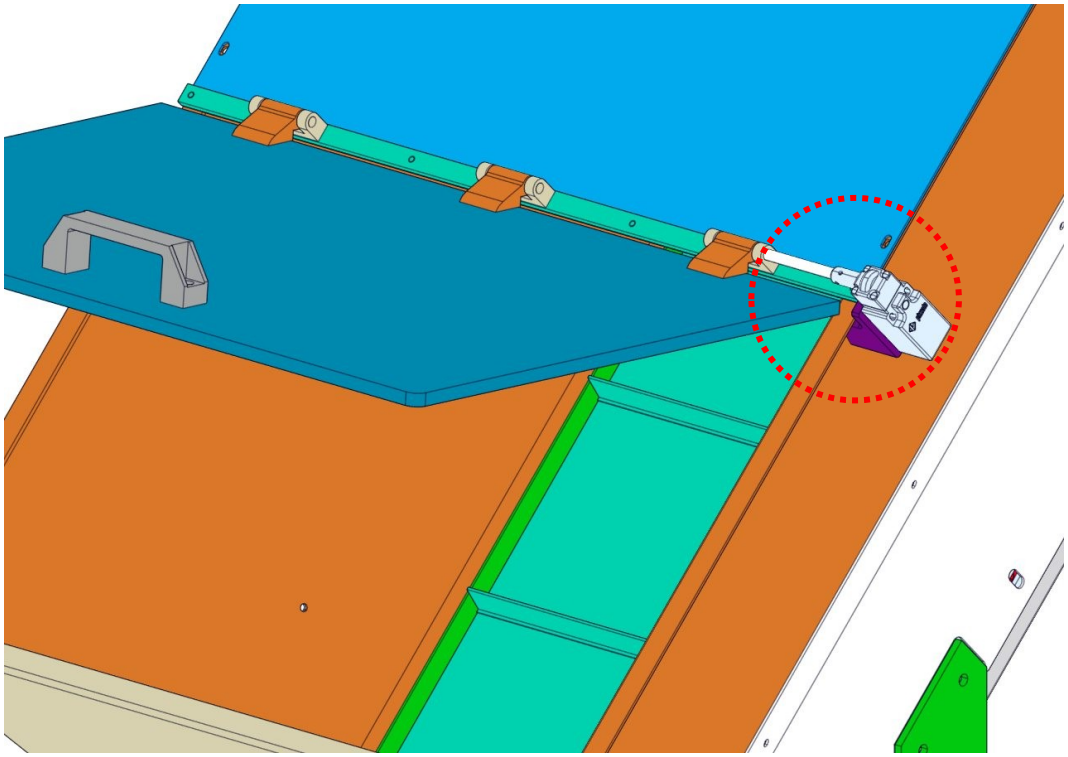
The steel cover can be equipped with transparent lexan door.



Loading door

3.3 SAFETY SWITCH FOR HINGES

Upon request, the loading door can be equipped with safety sensor, to prevent movement of the belt whenever the loading door is open.



Hinges safety switch

4 TECHNICAL FEATURES

The partly completed machinery is provided with the following main features:

- **PARTLY COMPLETED MACHINERY**

NAME	BELT ELEVATOR
MODELS REFERRING TO THIS MANUAL	CAR-25 CAR-50 CAR-75 CAR-100 CAR-150
YEAR OF PRODUCTION	2022
SERIAL NUMBER	…

- **OCCUPATIONAL STANDARD THRESHOLD VALUES**

TEMPERATURE	(°C)	50
HUMIDITY	(%)	80

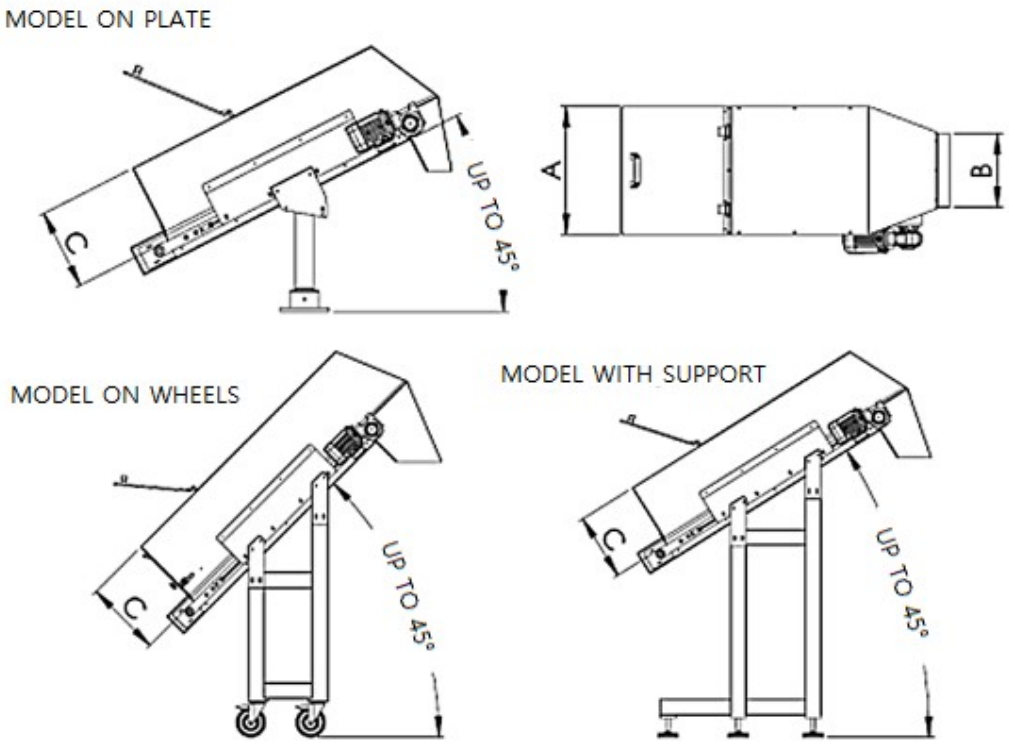
- **ENGINE DATA**

MOTOR	-	BN63B4 B14 0.18Kw
POWER	(kW)	0,18
TENSION	(V)	230/400
SPEED	(rpm)	1500

- **ADDITIONAL DATA**

MODEL	Weight [kg]
…	…

- **TECHNICAL DATA**



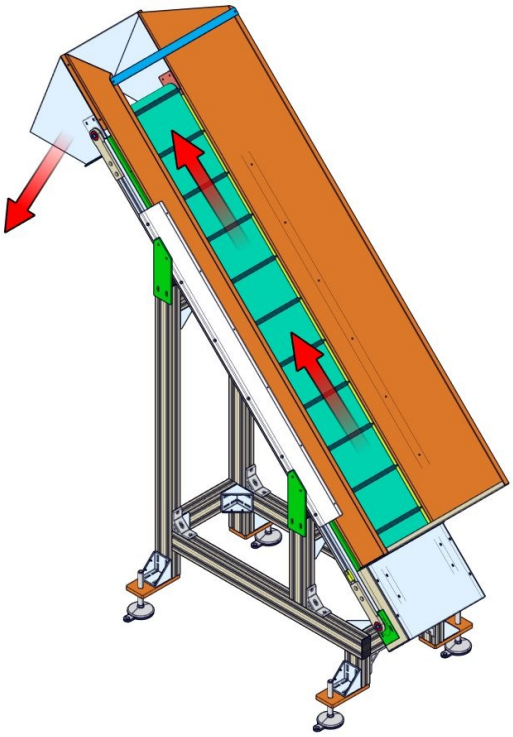
The following table shows standard dimensions and hopper capacity of the different models available

MODEL	HOPPER CAPACITY Lt.	STANDARD DIMENSIONS [mm]		
		A	B	C
CAR-25	25	335	225	235
CAR-50	50	550	325	285
CAR-75	75	550	325	335
CAR-100	100	650	425	335
CAR-150	150	650	425	385

For all the versions, the width and height of the hopper are standard, while the centre-to-centre distance may vary according to requirements; for more info, please refer to the technical drawings supplied by the producer.

4.1 WORKING PRINCIPLE

The BELT ELEVATOR has been designed and manufactured to facilitate the displacement of materials from top to bottom without manual intervention.
The partly completed machinery object of this manual allows to transport products from previous stages to the relevant discharge area, in order to allow their transfer to further processing.
Actuated by a gearmotor, in consists in a driving roll conveying movement to the vertical belt, which displaces the materials from top to bottom.
The loading elevators can be positioned with a variable inclination ranging between 0° and 45° according to requirements.
The partly completed machinery has already been tested in the factory prior to shipping; it is anyhow advisable to check the correct working condition before its use.



Representation drawing operation of partly completed machinery

4.2 CONTROL PANELS

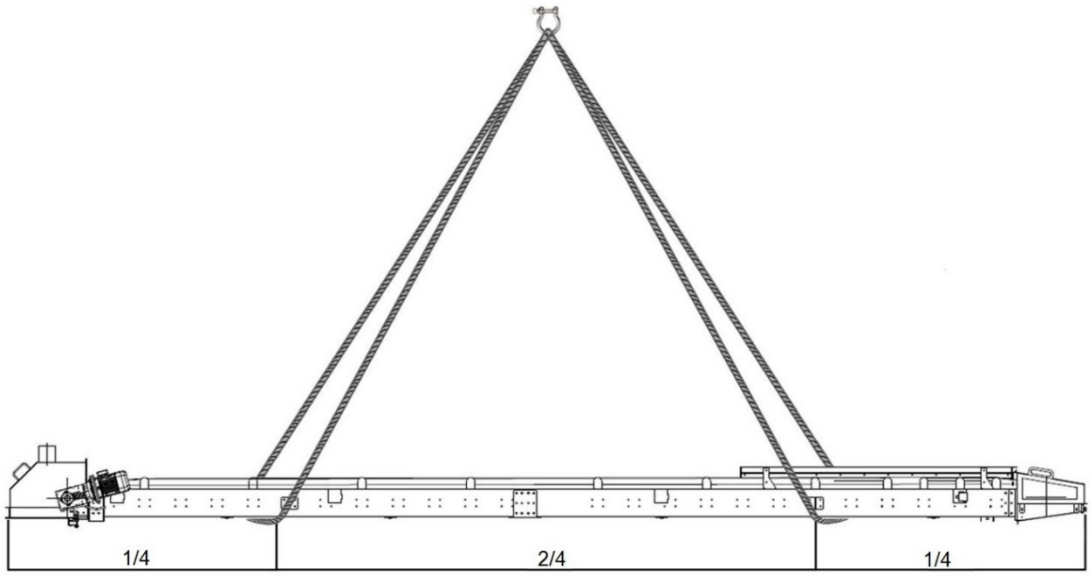
The partly completed machinery object of this manual does not include a control panel, being therefore controlled by the general electrical switchboard of the installation it is part of.
Concerning the belt elevator control panel, please refer to relevant manual.

5 TRANSPORT AND COMMISSIONING

5.1 TRANSPORT AND HANDLING

Handling activities connected to the transportation of the partly completed machinery must be conducted in compliance to below mentioned indications, using suitable personal protection equipment.

While preparing the partly completed machinery for transport, it is necessary for its components to be separated in order to perform safe handling. Make sure all necessary equipment and tools are available (hooks, straps, chains, eyebolts, etc.) suitably dimensioned to the weight of the components to be fixed and handle and making sure that the equipment used is approved and in good working order.
In this case, the elevator can be separated in belt and support frame, to facilitate handling.



Hoisting representation drawing

In order to hoist the single components, use solely systems and devices suitable with regards to weight, load size and characteristics of the partly completed machinery (centre of gravity, protrusions, fragile parts to be protected, etc....).

Example of loading/unloading operations

It is important, while carrying out such operations, to pay attention not to damage the partly completed machinery in any of its components and not to jeopardise the settings used during construction and testing.
In case of impact, it is essential to check the presence of possible distortions and, when necessary, require the intervention of an authorised technician in order to verify the suitability of the partly completed machinery before starting it.

During the handling operations nobody should be allowed in the manoeuvring area; the surrounding area is to be considered hazardous and must be segregated to avoid accidental access. Hoisting equipment shall be operated solely by specifically trained personnel. The person in charge of handling must verify the stability of the load before hoisting and handling. Walking and standing under suspended loads is forbidden.

The local personnel should be aware of all accident prevention rules.

5.2 STORAGE

Whenever the partly completed machinery needs to be stored, it is important to protect it from external agents such as rain or wind, possibly in a dry and suitable area; all necessary maintenance operations should also be carried out to guarantee subsequent operation.

5.3 ASSEMBLY INSTRUCTIONS OF THE PARTLY COMPLETED MACHINERY

All assembly and incorporation operations concerning the partly completed machinery shall be carried out directly by the manufacturer or by qualified technicians who must have read this manual.

Assembly and incorporation of the partly completed machinery must be planned, in terms of methods and timeframe, upon assessment of logistics, availability of equipment and resources.

All the technical characteristics of the partly completed machinery necessary for its regular assembly and incorporation are included in this chapter.

5.3.1 INSTALLATION

For the regular operation of the partly completed machinery the latter should be positioned on a flat surface, of suitable size, taking into consideration the total weight of the partly completed machinery.
By means of suitable hoisting equipment (in this phase, the use of equipment with central hoisting system is suggested) proceed to slightly lift the partly completed machinery in order to verify adequate balancing. During the hoisting phase progress consistently, without sharp pulls. Make sure that nobody is allowed within the hazard area. Position the equipment in the area of use and then proceed with assembling the components which might have been dismantled for transportation purposes.
The electrical connection operations of the partly completed machinery are limited to the power supply of the engine or variable speed gearmotor.

When present, make sure the supporting structure is equipped with all protections necessary to guarantee the safety of those who need to access the partly completed machinery according to what provided for by current accident prevention regulations.

5.3.2 INCORPORATION

Incorporation of the partly completed machinery must be carried out solely by specifically trained personnel and according to the following procedure:

- Position the partly completed machinery within the established installation area;
- Proceed with connecting and fixing the partly completed machinery to other machinery/partly completed machinery;
- Connect to the mains.
- Assess possible incorporation risks (machinery/partly completed machinery group);
- Perform CE certification of the machinery/partly completed machinery group before use.

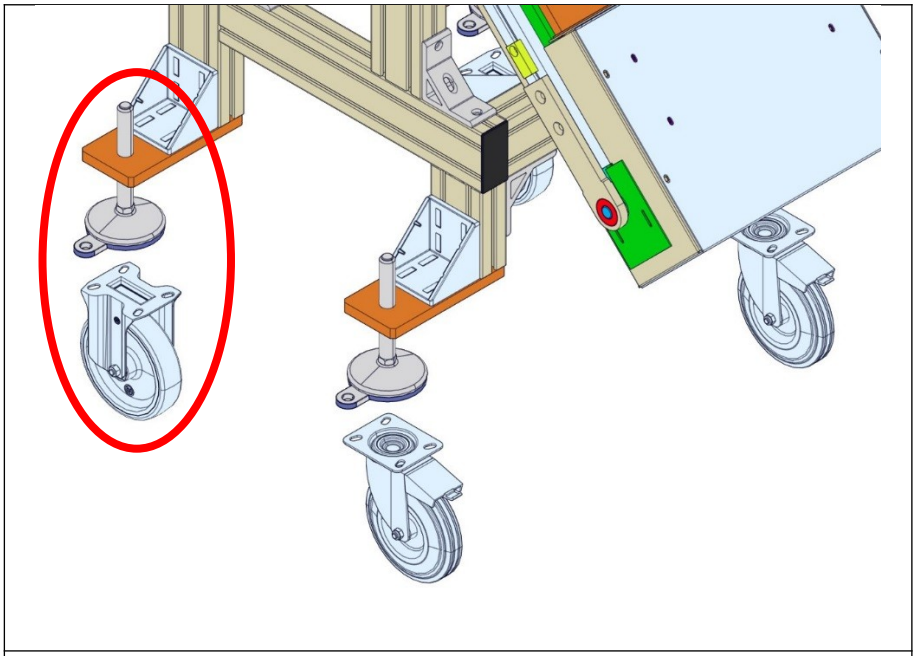
With regards to the hoisting and transport operations performed in this phase, please refer to the paragraph “TRANSPORT AND HANDLING”.
Before any assembly and installation operation, see relevant specific diagrams and technical drawings supplied by the manufacturer.

Follows information necessary to perform the correct incorporation of the partly completed machinery to other machinery/partly completed machinery.

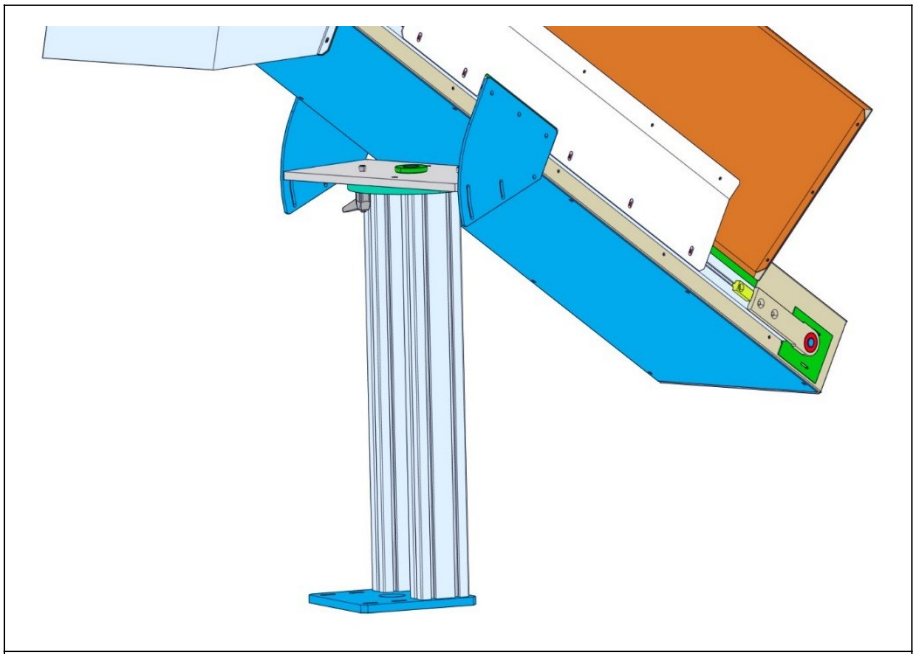
The manufacturer declines any responsibility with regards to damage due to improper incorporation performed without following the instructions included in this manual.

SECURING OF SUPPORT STRUCTURE

According to the different versions, the belt elevator shall be positioned and secured by means of relevant anchoring systems. Follows reference image.



Ground model (support and wheels variants)



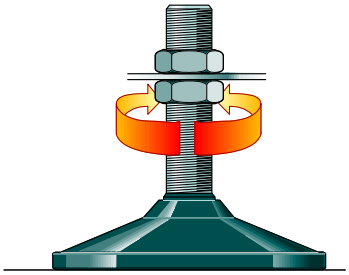
Bench model (on plate)

5.3.3 CONDITIONS IN WHICH THE PARTLY COMPLETED MACHINERY FULFILS STABILITY REQUIREMENTS

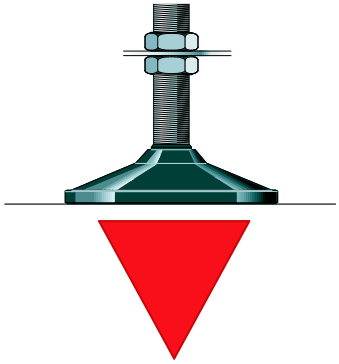
VARIANT ON SUPPORT

- Do not start the partly completed machinery when not perfectly levelled.

Once traced the overall dimension of the partly completed machinery on the floor, position the equipment in the established area, adjusting the height of supports and securing the feet to the ground by means of relevant gussets.



1. *Unscrew the lock nut*
2. *Adjust the height by means of foot screw*
3. *Tighten the lock nut*



The partly completed machinery does not need specific interventions with regards to foundations: nonetheless, it is necessary, for the customer, to make sure that such foundations are suitable to support the weight of the machinery.

In order to guarantee flooring within tolerance with regards to the weight of each machinery, the load must comply with the following parameters:

- Minimum load 20000 N/m2
- Tensile strength 100 N/cm

It is important to remember that each machinery is equipped with supporting feet; the load, therefore, is distributed on and borne solely by the feet, as approximate concentrated load on the single support points

$$\frac{Pt}{n} = Pc$$

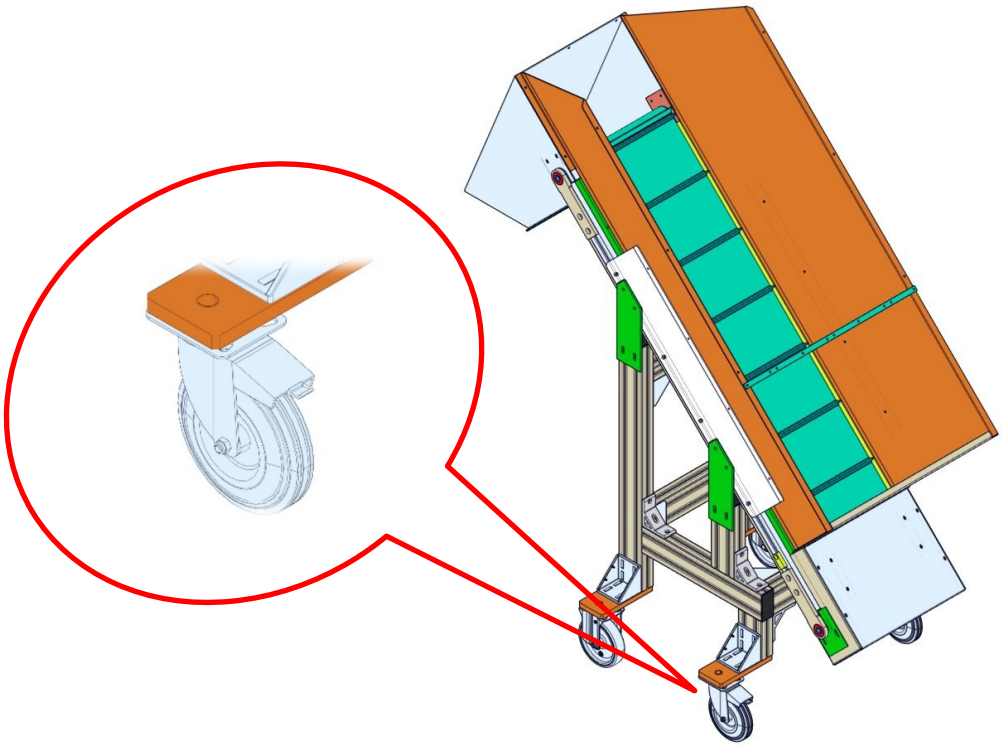
Pt = total weight
Pc = concentrated load
n = number of supporting feet

VARIANT ON WHEELS

- Do not start the partly completed machinery when not perfectly levelled.

The partly completed machinery is designed and manufactured to be handled by hand, given the presence of fixed wheels and pivotal wheels with brake, the operator must make sure to:

- Always handle the partly completed machinery on levelled surfaces and never on sloping ones;
- Position the partly completed machinery close to the working area making sure to have activated the brakes on the pivotal wheels.



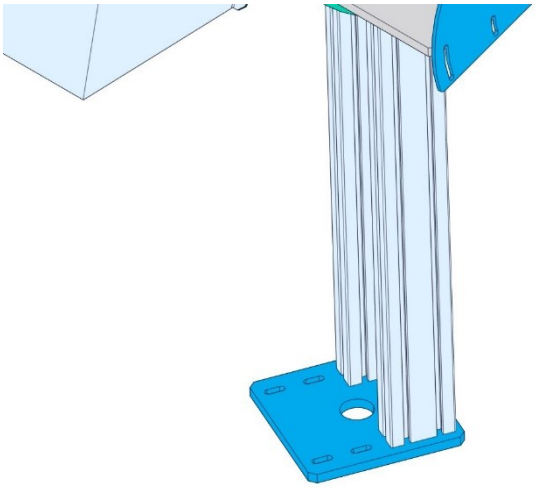
Position of pivotal wheels with brake

The removal of brakes on the pivotal wheels must not take place during the partly completed machinery operation.

VARIANT ON PLATE

Do not start the partly completed machinery when not perfectly levelled and secured to the ground.

Once traced the overall dimension of the partly completed machinery on the floor, position the machinery in the established area and secure to the ground by means of relevant fixing plates the support structure is equipped with.



The partly completed machinery does not need specific interventions with regards to foundations: nonetheless, it is necessary, for the customer, to make sure that such foundations are suitable to support the weight of the machinery.
In order to guarantee flooring within tolerance with regards to the weight of each machinery, the load must comply with the following parameters:

- Minimum load 20000 N/m2;
- Tensile strength di 100 N/cm

It is important to remember that each machinery is equipped with supporting feet; the load, therefore, is distributed on and borne solely by the feet, which become concentrated load points.

$$\frac{Pt}{n} = Pc$$

Pt = total weight
Pc = concentrated load
n = number supporting feet

Use only the bores present on the fixing plate.

Tighten the fixing screws of the device by means of suitable torque wrench, in compliance with the tightening torque included in the table below.

MF	Nm
M5	5.5
M6	10
M8	23
M10	46

5.3.4 CONNECTIONS

ELECTRICAL CONNECTIONS

WARNING!
The activities described in this paragraph must be performed by qualified operators, namely:

- **Trained technician** having completed training and specialising courses, experienced with regards to the installation, commissioning and maintenance of the installations, and aware of accident prevention rules.

WARNING!
Make sure that the characteristics of the power supply the base is going to be connected to are in accordance with those indicated in the label (voltage and frequency).

PNEUMATIC CONNECTIONS

The partly completed machinery object of this manual does not require pneumatic connections.

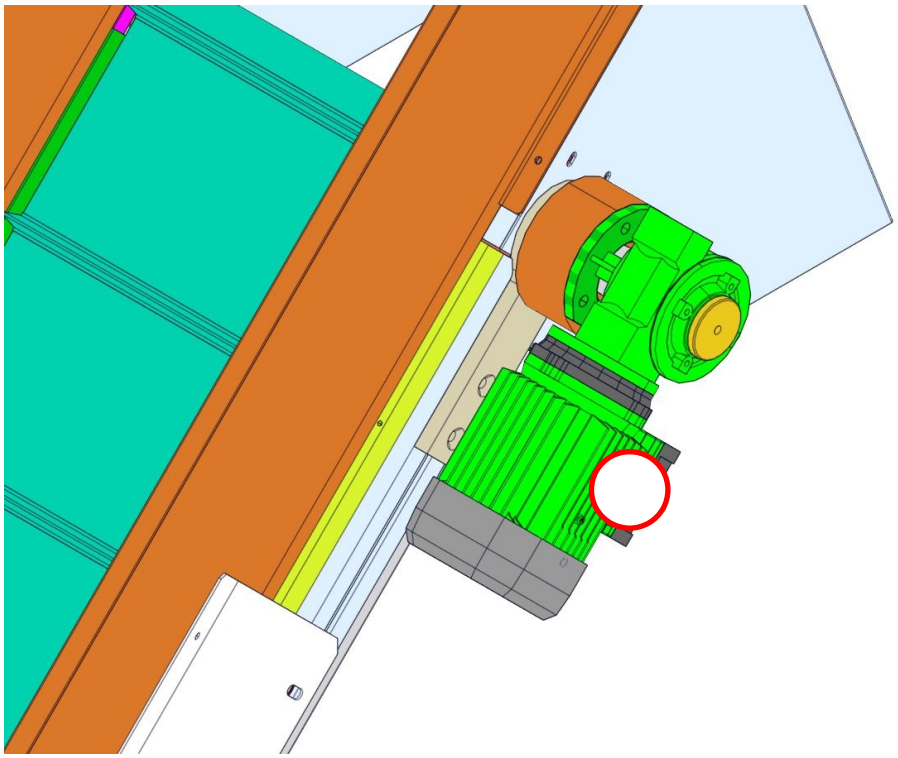
HYDRAULIC CONNECTIONS

The partly completed machinery object of this manual does not require hydraulic connections.

CONNECTION MAP

The partly completed machinery is equipped with electrical connection.

For further details, please refer to specific documents.



Connection map

Electrical connection	○

5.4 COMMISSIONING

These instructions refer to activities performed before commissioning and must be conducted by qualified personnel.

Before commissioning of the partly completed machinery a general assessment is needed:

- Verifying that all operations included in the paragraphs “INSTALLATION” and “INCORPORATION” have been carried out;
- Manually oscillating the partly completed machinery in order to verify its settlement;
- Checking the possible presence of interference between the partly completed machinery and surrounding structures;

In case of interference do not start the equipment prior to their removal.

- Verifying tightening of the components locking screws;
- Checking the engine direction of rotation to avoid damage; this operation must be strictly performed at the first start and at any replacement of the engine;
- Making sure all the established points are lubricated, this operation must be carried out at the first start (for further details about intervention intervals please refer to maintenance instructions);
- Verifying that all relevant protections of the moving parts are in place;
- At the first start after a long stop, after having performed a working cycle, a new assessment of the machinery bolts tightening must be carried out.

The partly completed machinery is supplied complete of all settings in place, however, in case of problems, please proceed according to what indicated in the paragraph “SETTING PROCEDURES”.

Before commissioning, the partly completed machinery should be subject to an initial starting procedure; this is necessary also after a lengthy period of inactivity.
Verify then the presence of possible obstacles with regards to moving parts; at the first start of the partly completed machinery all the moving parts should be checked, making sure it completes a whole cycle.

During commissioning operations, the following prescriptions must be followed:

- Protective devices should not be removed or made ineffective; namely safety switches mustn’t be tampered with.
  While performing maintenance operations on the partly completed machinery, it may be necessary to temporarily disconnect safety devices: this operation can only be performed by authorised and duly trained personnel.

- Do not keep hands next to the rotating parts of the partly completed machinery.
  Do not wear clothing which might get tangled in the moving parts (scarves, rings, bracelets, watches etc).
  People with long hair should use clips or caps to enclose it.

- It is forbidden to perform operations on live parts.

5.5 REINSTALLATION

In order to dismantle the equipment, in case of sale, re-installation or storage at the client's premises, please comply with following general dismantling procedure:

a) Position the moving parts of the partly completed machinery in the most suitable position for transportation purposes;

b) According to the different joint points, enumerate all the parts to be separated, to facilitate future mounting operations;

c) Remove the electrical and pneumatic power supply (when present);

d) Disconnect all electrical cables, according to the following procedure:
   1. Remove the cables from the switchboard;
   2. Remove them from the conduits up to the group they are connected to;

e) Possibly dismantle the partly completed machinery by separating the parts indicated;

f) Proceed to fix, by means of mechanical blocks or other devices, all the parts subject to movement during transportation.

For the new positioning and connection, please refer to the relevant paragraphs included in this manual. In case of long storage, make sure the partly completed machinery is sheltered from rain and wind, possibly in a dry area.

Make sure to provide suitable protection to electrical parts, such as switchboards, control panels and all those parts which can be affected by humidity and temperature fluctuations.

5.6 DEMOLITION AND DISPOSAL

At the end of its life cycle, users must deal with the disposal of the partly completed machinery in compliance with what provided for by the regulations in force, starting from the removal of lubricants and general cleaning of the different parts, proceeding then to separate the parts the partly completed machinery consists of.
After having dismantled the partly completed machinery as per above mentioned procedure, the different materials need to be separated according to what provided for by the current laws in force.

With regards to removal, it must be pointed out that the materials the partly completed machinery is made of are not hazardous ones and essentially consist of:

1. Painted, plastic coated or galvanised ferritic steel;
2. Plastic material in polyethylene, filled or not, or adiprene;
3. Elastomers;
4. Electrical cables with relevant sheathing;
5. Control and actuation electronic devices;
6. Supporting feet and derivative rubber materials.

WARNING!

While dealing with the disposal it's necessary to comply with the current national regulation in force. Please store polluting materials such as lubricants and solvents in metallic containers only.

With reference to the disposal of consumables, please comply with following general rules:

- the PLC battery must be replaced by electrical maintenance personnel;
- exhausted batteries must not be disposed of with common waste, but they should be delivered to suitable disposable facilities;
- exhaust lubricants, oily residuals and oil-soaked objects must be disposed of in relevant collection points, avoiding discharge in municipal draining facilities.

6 SAFETY

Each Gasco group S.r.l. partly completed machinery is produced in compliance with the relevant regulations in force on the subject.
The partly completed machinery is equipped with safety devices for the prevention of dangers to people operating on it or in the surrounding areas.
Failing to follow what included in this manual, an improper installation or poor periodic maintenance, can result in problems to the partly completed machinery and unpredictable risks for the operators.

The warnings included are aimed at providing useful information about the partly completed machinery in general, to avoid hazards for the people and properties.

Incident free operations mainly depend on the personnel involved in the use, maintenance and repair of the partly completed machinery, who must operate in a diligent way and in full compliance with safety regulations, strictly applying what indicated in these technical documents.

This symbol indicates that dismantling crankcases is forbidden.

When encountering this signal, the operator must keep the crankcase mounted at all times.

Make sure that the safety prescriptions are known and complied with by all the personnel involved in the use, cleaning and maintenance of the partly completed machinery.

It is the responsibility of the employer to inform the personnel about the following subjects referring to safety issues with regards to the use of the partly completed machinery:

- **injury risk;**
- **current residual unremovable risks;**
- **devices aimed at the safety of operators;**
- **general accident prevention rules established by directives.**

6.1 PERSONAL PROTECTION EQUIPMENT

The personal protection equipment to be made available to operators in charge of the partly completed machinery must comply with current laws in force; the adoption of the different devices shall be established in advance according to the operations the personnel are called to perform.

USE OF PARTLY COMPLETED MACHINERY

Personal protection equipment which the operator must wear during the use of the partly completed machinery consists of:

- overalls;
- accident prevention footwear;
- disposable hair net or cap;
- disposable beard cover.


Together with above mentioned equipment, when necessary, the following items must be provided:

- gloves;
- hearing protection devices;
- protection goggles;
- respiratory protective equipment.


CLEANING OPERATIONS

The personal protection equipment which qualified operators must use during cleaning consists of:

- overalls;
- accident protection footwear;
- disposable hair net or cap;
- disposable beard cover;
- gloves;
- protection goggles.


MAINTENANCE OPERATIONS

The personal protection equipment which qualified operators must use in case of maintenance operations consists of:

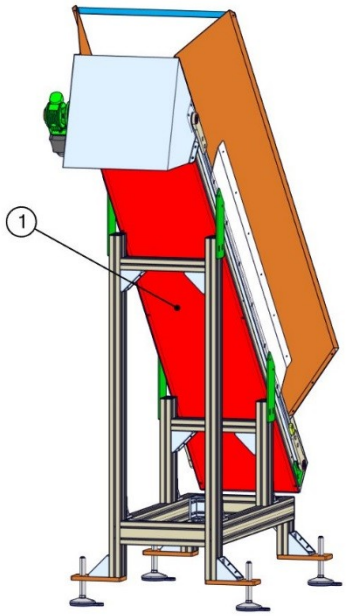
- overalls;
- accident prevention footwear;
- disposable hair net or cap;
- disposable beard cover;
- gloves;
- protection helmet.

6.2 FIXED GUARDS

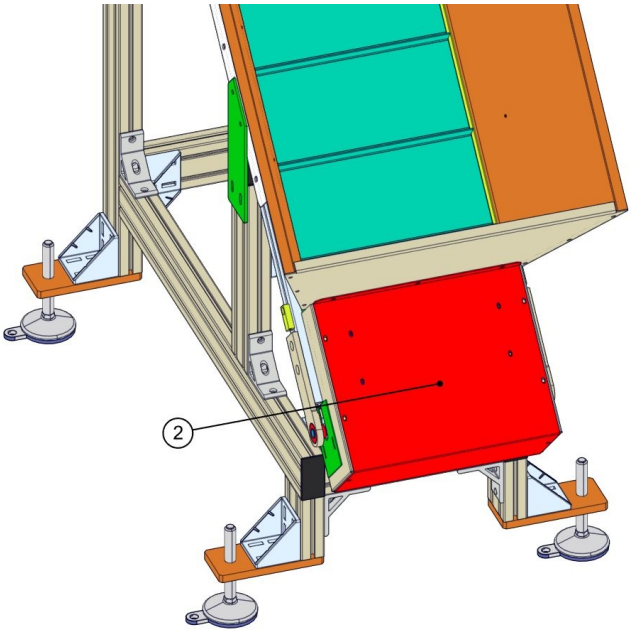
The partly completed machinery object of this manual, includes the following fixed guards:

1- crankcase under the belt;
2- crankcase covering the driving plate.

The following image shows, in red, above mentioned fixed guards.



Crankcase under the belt



Crankcase covering the driving plate

These guards are connected to the partly completed machinery and can be removed solely by means of suitable spanners, solely available to authorised personnel.
The partly completed machinery and the components installed within it may be equipped with fixed dedicated guards required by risk assessments performed after the incorporation of the partly completed machinery with the installation it is used in.

All guards must be mounted before starting the partly completed machinery and can solely be removed when the partly completed machinery is not working, by maintenance personnel.

It is responsibility of the customer, by means of the personnel in charge of operation and maintenance of the partly completed machinery, to make sure that these are properly maintained.
The producer shall not be responsible with regards to possible damage or injuries resulting from lack of use or not pristine status of safety guards.

DO NOT USE THE PARTLY COMPLETED MACHINERY WITHOUT FIXED AND MOUNTED GUARDS.

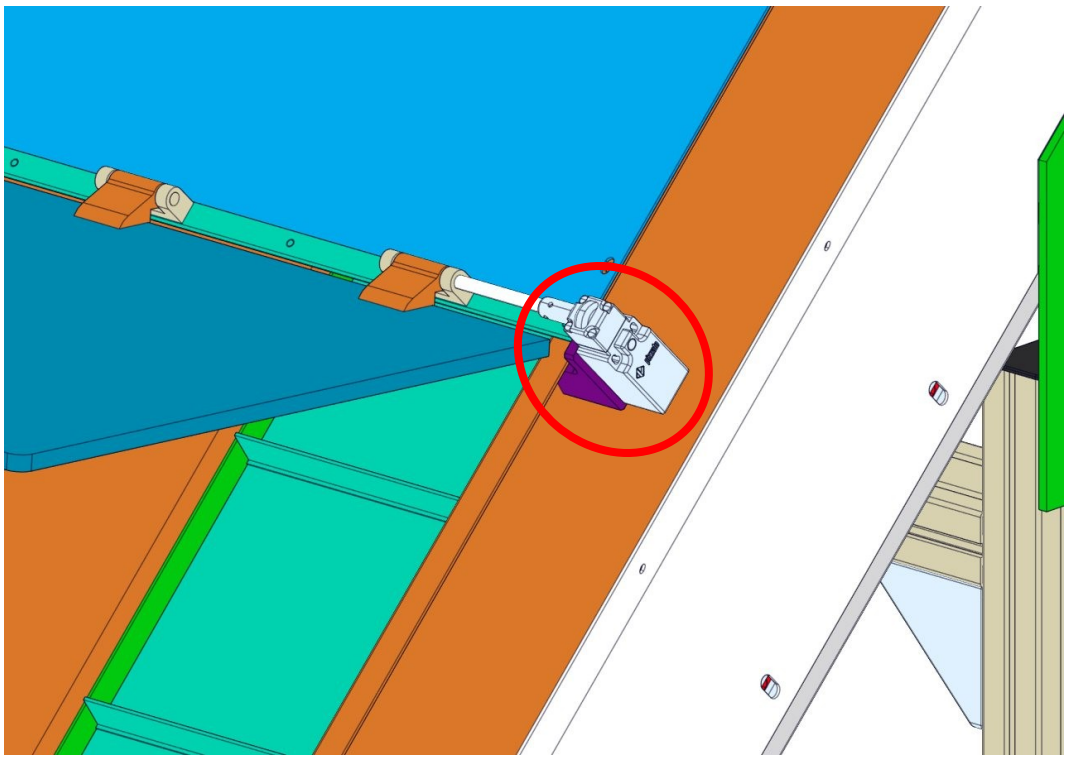
6.3 MOBILE GUARDS

The partly completed machinery object of this manual, in the standard version, does not require the installation of mobile guards.
The partly completed machinery and the components installed within it may be equipped with mobile dedicated guards required by risk assessments performed after the incorporation of the partly completed machinery with the installation it is used in.

6.4 FURTHER SAFETY DEVICES

6.4.1 HINGES SAFETY SWITCH

The loader tank can be equipped with suitable INOX AISI 304 covers with loading door in transparent lexan. This loading door can be supplied, upon request, with safety sensor, in order to prevent movement of the belt whenever the loading door is open.



Position of hinges safety switch

The partly completed machinery and the components installed within it may be equipped with further safety devices required by risk assessments performed after the incorporation of the partly completed machinery with the installation it is used in.

6.5 WARNING DEVICES

The partly completed machinery object of this manual, in the standard version, does not require the installation of warning devices.
The partly completed machinery and the components installed within it may be equipped with further dedicated safety devices required by risk assessments performed after the incorporation of the partly completed machinery with the installation it is used in.

6.6 EMERGENCY STOP DEVICES

The partly completed machinery, in the standard version, is supplied without emergency stop devices.
The safety devices must be used in case of imminent danger or mechanical incidents.
Installation and subsequent connection of necessary emergency stop devices must be performed by qualified technicians after the incorporation of the partly completed machinery.

We shall not be responsible for damages to people, animals and properties, due to the improper installation and connection of emergency stop devices and/or performed by unqualified personnel.

Emergency stop devices certified and to standard can only be used.

We shall not be responsible for damages to people, animals and properties, due to the installation of emergency stop devices not to standard.

Please refer to the documents provided with reference to the incorporation of the machinery/partly completed machinery.

6.7 LIGHTING

The partly completed machinery is supplied without any lighting system, therefore it should be used in areas and premised with a suitable lighting level; when the incorporation of the equipment within the machinery/partly completed machinery group is implemented, it is the responsibility of the incorporator to perform an assessment and evaluate the possible need for further artificial lighting systems.

6.8 SAFETY OF ELECTRICAL SYSTEMS

For a safe operation of the partly completed machinery, it is paramount that the electrical system is designed, implemented and installed according to the current regulations in force.

Check the correct connection of the power cord.

When the supply of the partly completed machinery does not include electrical switchboards, the customer must make sure that the partly completed machinery is connected to a switchboard designed and manufactured according to the current regulations in force; such electrical board must be equipped with general switches and protective devices on the door to avoid opening of the latter if energised.

We shall not be responsible for damages to people, animals and properties, due to the connection of the partly completed machinery to switchboard not to standards, improperly designed and manufactured or by unqualified personnel.

7 RISKS

7.1 INTRODUCTION

The partly completed machinery has been designed and manufactured with characteristics and features aimed at guaranteeing the safety of the operator and remove or reduce risks as much as possible.
Necessary protection measures must be adopted with regards to risks which cannot be removed. Furthermore, it is compulsory to inform users of the partly completed machinery concerning residual risks due to the incomplete efficiency of above-mentioned protection measures.

The employer is responsible for the training of operators and maintenance personnel, also by means of relevant courses, in order to suitably instruct the personnel about general and residual risks.

As most risks are incurred in when operators access the hazard zone to adjust, clean, maintain the partly completed machinery or perform other manual operations which might be necessary, such operations should be performed with the utmost attention.

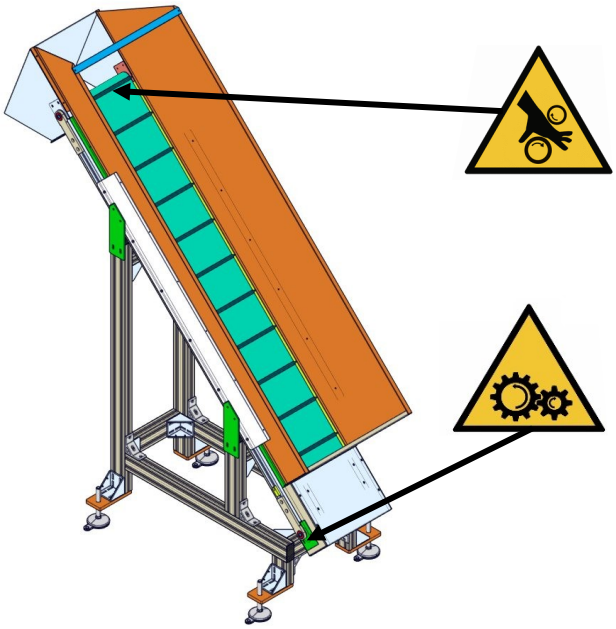
7.2 RESIDUAL RISKS

The partly completed machinery must be operated solely by suitably trained personnel, fully aware of what provided for by this manual and the general regulations concerning safety in the workplace.

The partly completed machinery has been designed and manufactured by the producer in order to operate, once incorporated in machinery/partly completed machinery systems or in a machinery, at the highest safety level.
All the energised moving mechanical parts and components which might be source of hazard are equipped with protections aimed at making them not accessible and anyhow located where they cannot be reached in normal working conditions.
During the incorporation of the partly completed machinery with other machinery/partly machinery systems, it is necessary to perform a risk assessment of the whole system.
Despite all precautions adopted during the design and manufacturing phase of the partly completed machinery, some residual risks should be taken into consideration:

Limbs pinching risk

Before performing use and maintenance operations, wear suitable protection gloves.



Location of residual risks

Slipping and/or fall risk in the proximity of the partly completed machinery.

To remove this risk, it's important to:

- **Keep the working area clean/free, making sure that all obstacles and material residuals within the work area are removed. The personnel in charge must be equipped with relevant personal protection equipment such as shoes and helmets.**

Risk of impact or crushing due to unexpected movements while maintenance operations are being performed.

Before conducting maintenance operations of any level, the personnel in charge must comply with the following procedure:

1- Position the general switch on OFF and lock it;
2- Place the sign "ONGOING MAINTENANCE – DO NOT CONNECT POWER" next to the general switch.

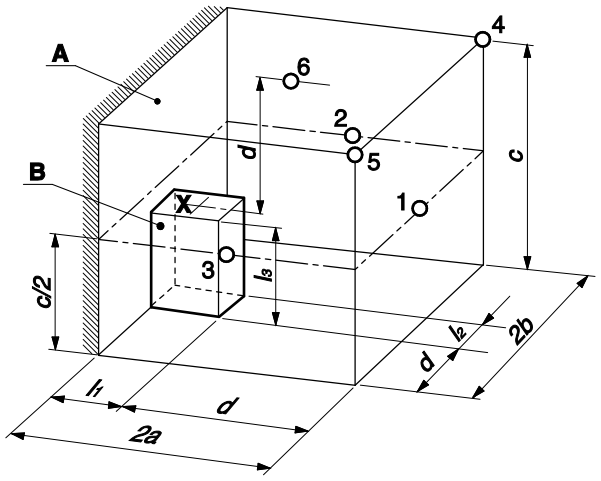
Risk of breakage or damage, with possible lowering of the safety level, of the electrical system components due to short circuit.

Before conducting the electrical connections with the plant mains, verify that the electrical supply complies with the established requirements; if not, install all necessary limiting devices.

7.3 ISTRUCTIONS CONCERNING NOISE REDUCTION

The partly completed machinery has been designed and manufactured in order to reduce noise emission to the minimum.
The measurements taken in operators workstations concerning a partly completed machinery belonging to the same series have resulted in the following values:

1 **A**-weighted peak emission level of sound pressure: LAp = 60 dB(A)



The measurement of the **A**-weighted equivalent sound pressure level has resulted as manufactured in compliance with the standard EN ISO 3744.

As provided for by this standard, the partly completed machinery is located concentrically with regards to the reference fictitious parallelepiped, with the direct longitudinal axis as the x axis and the front towards point 1 (see picture).

The instruments used for the measurements are the following:

- Digital multifunction Lafayette phonometer model DT-8820 class 1 in compliance with IEC 651 and IEC 804
- Sound level calibrator 4230 class 1 complying with the provisions of IEC 942 regulations.

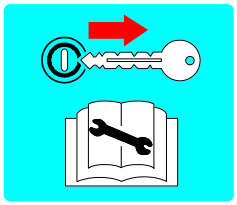
If the partly completed machinery is positioned in a reverberating environment, or in presence of other noise sources and the level of daily exposure is higher than 80 dB(A), there is a possible risk; therefore, in this case, it is the responsibility of the employer to implement suitable personal protection equipment for operators.

Conveyor belts, according to different use conditions (for instance in case of conveyance of special products or interaction with other machinery/partly completed machinery), may create A-weighted sound pressure levels higher than 80 dB (A); therefore, final users must perform necessary risk assessments in order to adopt suitable protection measures before commissioning.

7.4 INSTRUCTIONS AIMED AT THE REDUCTION OF VIBRATIONS

The partly completed machinery object of this manual does not create vibrations during normal operations.

8 DESCRIPTION OF ADJUSTMENT, MAINTENANCE AND CLEANING OPERATIONS

	**This is a mnemonic symbol, it indicates:** **The need of locking the general switch and remove the key before carrying out maintenance operations.**

	**This symbol indicates prohibition of lubricating moving parts.** **In presence of this signal, the operator must perform maintenance on the partly completed machinery when this has been stopped.**

8.1 ADJUSTMENT PROCEDURES

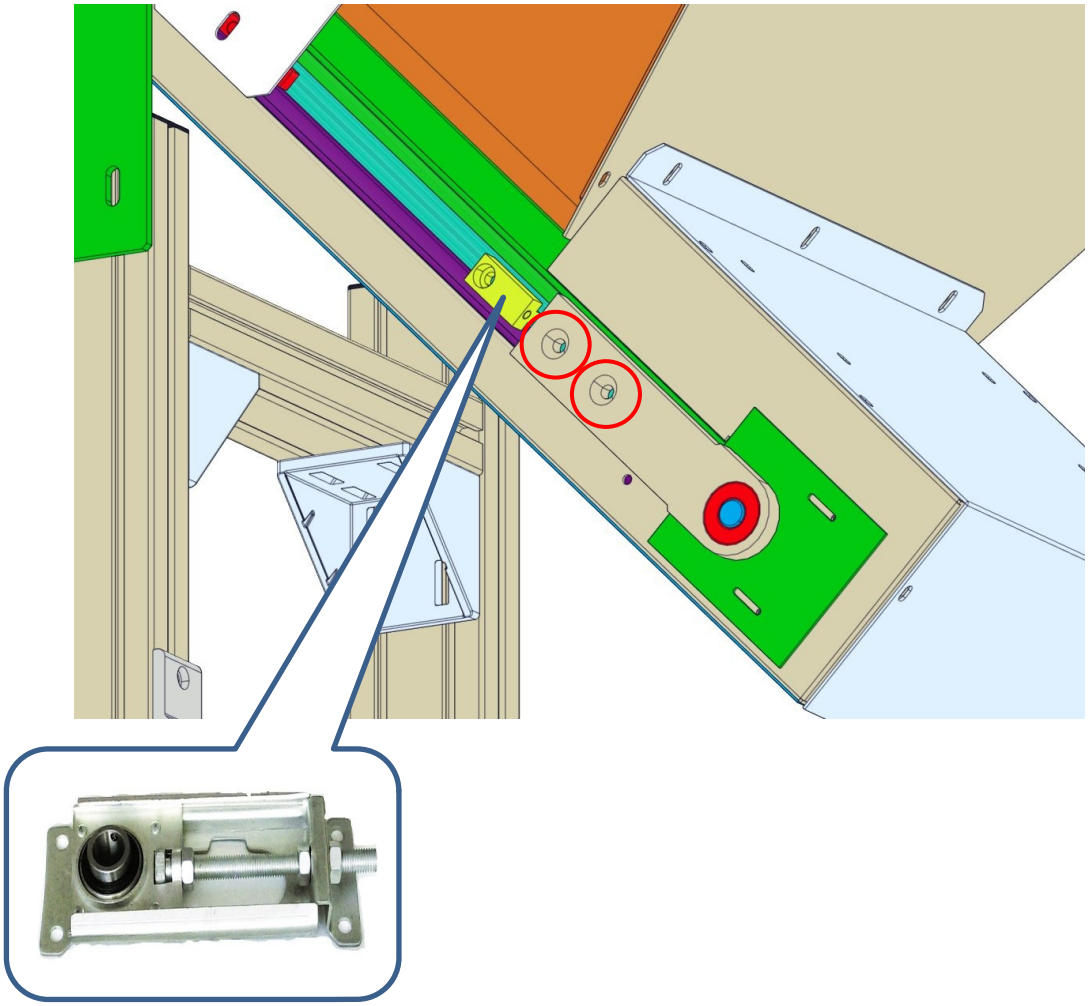
The table below shows the main adjustments established for the partly completed machinery BELT ELEVATOR.

ADJUSTMENT PROCEDURES				
ITEM	**CODE**	**INTERVENTION**	**OPERATOR**	**FREQUENCY**
1.	OR1	Belt tensioning and alignment	C2	When necessary
2.	OR2	Tilting adjustment – version on plate	C2	When necessary
3.	OR3	Orientation adjustment – version on plate	C2	When necessary

The values included in the column OPERATOR refer to the table “OPERATORS CLASSIFICATION” of this manual.

BELT TENSIONING AND ALIGNMENT	OR1
QUALIFIED OPERATOR	C2
FREQUENCY	When necessary
NECESSARY TIME:	15 minutes

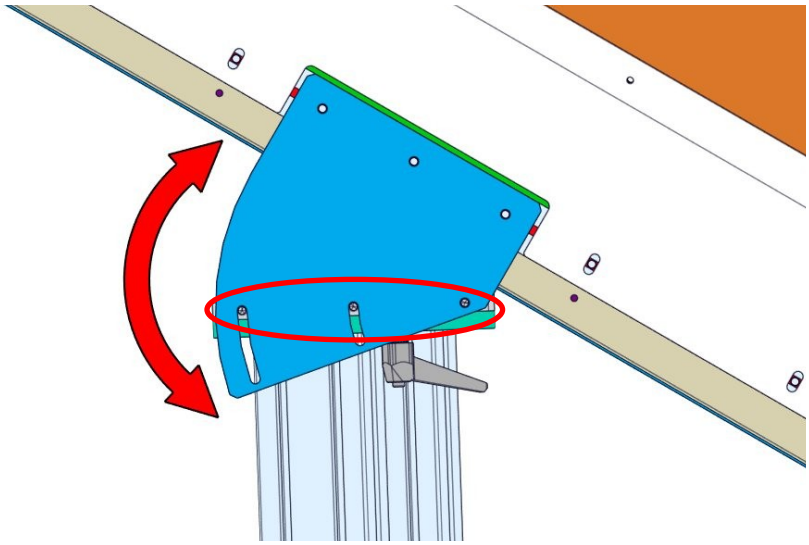
In order to carry out belt tensioning and alignment adjustments we need to act on relevant turnbuckles. To perform tension adjustments, loosen the fixing screws (red circle in the image) of the return plate and intervene on the adjustment screw, by tightening/loosening to reduce or increase tension; once reached the desired position, tighten the fixing screws one again.
Above mentioned adjustments are to be carried out on the return plate, by means of the two turnbuckles by intervening both on the right and left turnbuckle bolts.



TILTING ADJUSTMENT – VERSION ON PLATE	OR2
QUALIFIED OPERATOR	C2
FREQUENCY	*When necessary*
NECESSARY TIME:	10 minutes

In order to adjust tilting of the loader, version on plate, the relevant small parts must be used:

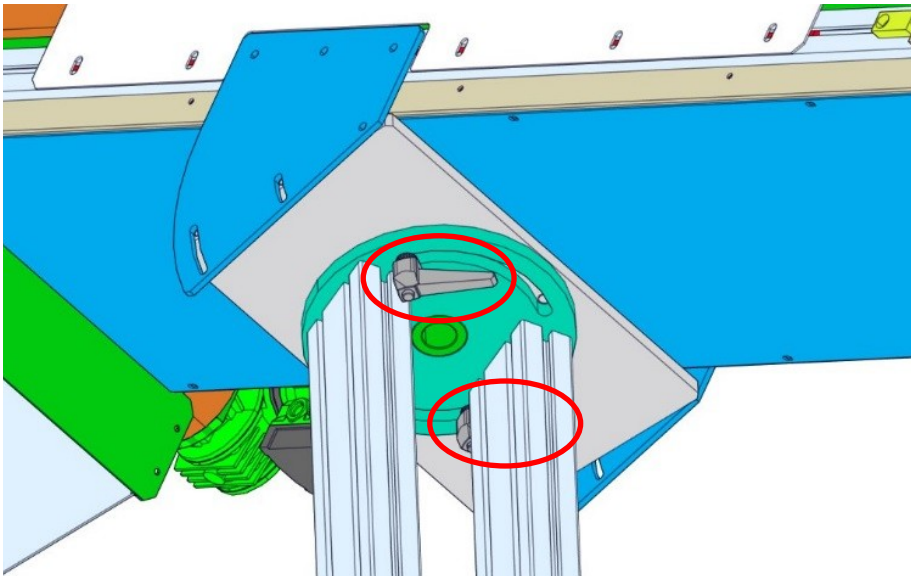
- Loosen the screws shown on the following image;
- Position the belt at the desired angle ;
- Tighten the fixing screws once again.



ORIENTATION ADJUSTMENT – VERSION ON PLATE	OR3
QUALIFIED OPERATOR	C2
FREQUENCY	*When necessary*
NECESSARY TIME:	10 minutes

To adjust orientation of the loader, version on plate, intervene on relevant levers:

- Act on the levers shown in the following picture by loosening them;
- Position the belt with the desired orientation;
- Tighten the levers again.



8.2 MAINTENANCE PROCEDURES

Maintenance consists of a group of organised activities which must be performed on the parts of the partly completed machinery on a regular and systematic basis.

Routine maintenance consists in:
1) assessment of the working state of the different parts;
2) removal or fixing of anomalies, even those which, even if not resulting in immediate hazards or technical malfunctioning, might create problems in the future due to their persistence.

Extraordinary maintenance consist in the full replacement of parts of the partly completed machinery which reached their average working life, in order to prevent damage resulting in the stoppage of the partly completed machinery or production.

It is essential to verify, by means of visual assessment, the general wear and tear of the partly completed machinery; this assessment should be performed in order to prevent possible damage or malfunctioning due to the use conditions relating to the environment, for example within steamy environments, or in particularly hot climates, etc.
The following table shows suggested routine maintenance operations with reference to the relevant description sheet. The timetables included are for reference only; the assessment should be conducted according to the actual use of the partly completed machinery.

Maintenance operations on the partly completed machinery should be performed after having checked that all provisions concerning safety are followed; when necessary, wear relevant personal protection equipment.

Please refer to the incorporation manual of the partly completed machinery to the machinery/partly completed machinery group.

For maintenance operations on the partly completed machinery it is important, when required, for precaution purposes, to intervene on the local switch disconnectors, by locking them in the position of power disconnection in order to stop, at all times, possible energising of the engines.

When lacking switch disconnectors, always use the general switch.

WARNING!

Before performing the operations indicated, make sure voltage is disconnected.

8.2.1 MECHANICAL INTERVENTION PROCEDURES

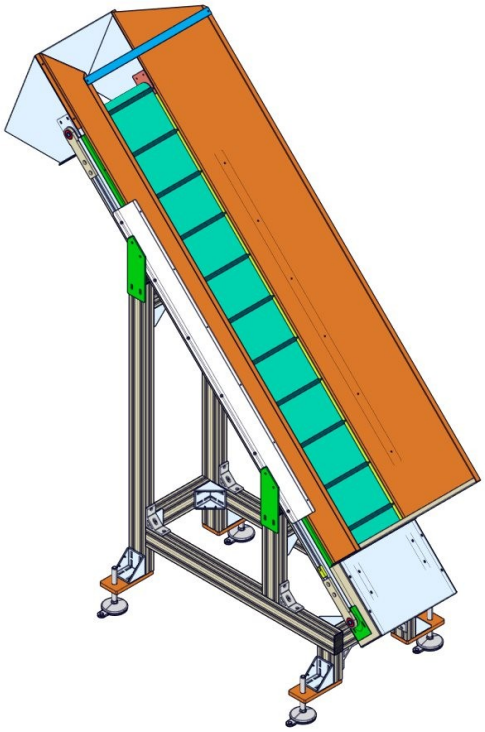
The following table shows the main mechanical maintenance operations established for the partly completed machinery BELT ELEVATOR.

MECHANICAL MAINTENANCE				
ITEM	**CODE**	**INTERVENTION**	**OPERATOR**	**FREQUENCY**
1.	OM1	Inspection of machinery components wear and tear	M1	Daily
2.	OM2	Quality inspection and replacement of gearmotor lubricants	M1	Semi-annual
3.	OM3	Lubrication of components subject to wear and tear	M1	Monthly

The values shown in the column OPERATOR refer to the table “OPERATORS CLASSIFICATION” of this manual.

WEAR AND TEAR INSPECTION OF THE PARTLY COMPLETED MACHINERY COMPONENTS	OM1
QUALIFIED OPERATOR	M1
FREQUENCY	Daily
NECESSARY TIME:	15 minutes

Visually inspect each component of the partly completed machinery.
In case of anomalies or damaged parts, proceed to repair the component. When necessary, replace the damaged part.

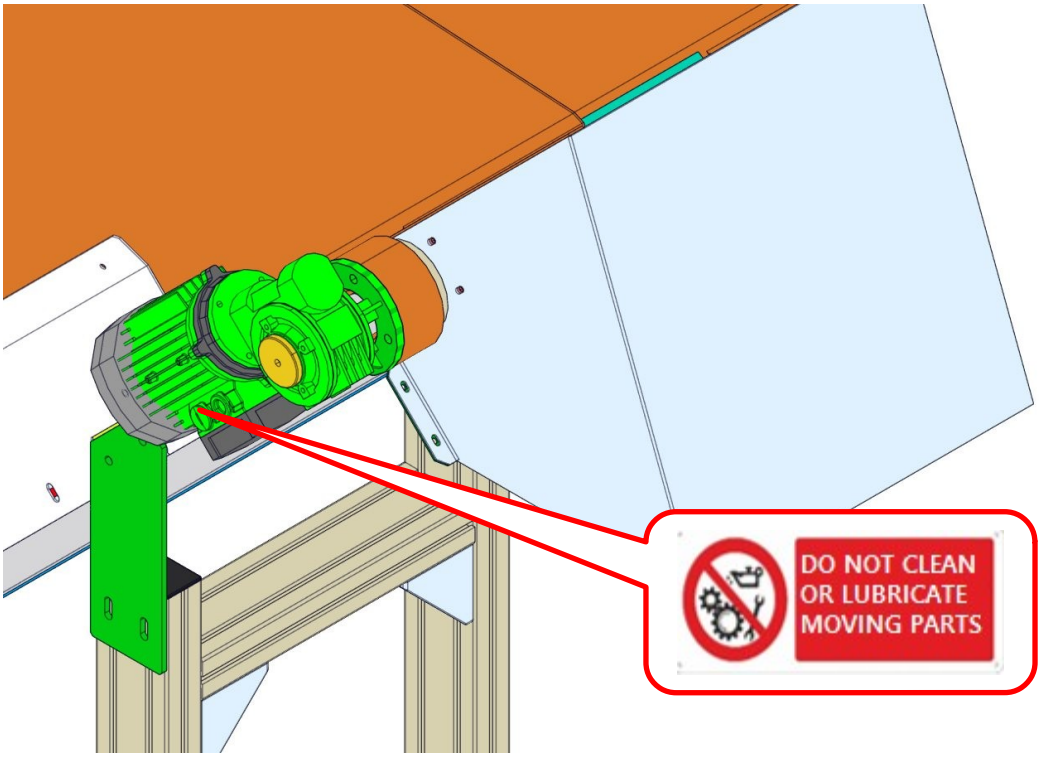


DO NOT REMOVE SAFETY DEVICES WHEN THE MACHINERY IS OPERATING	**ALITY INSPECTION AND REPLACEMENT OF GEARMOTOR LUBRICANTS**	**OM2**
QUALIFIED OPERATOR	M1	
FREQUENCY	Semi-annual	
NECESSARY TIME:	30 minutes	

Verify the state of the gearmotor lubricants, replenishing them.

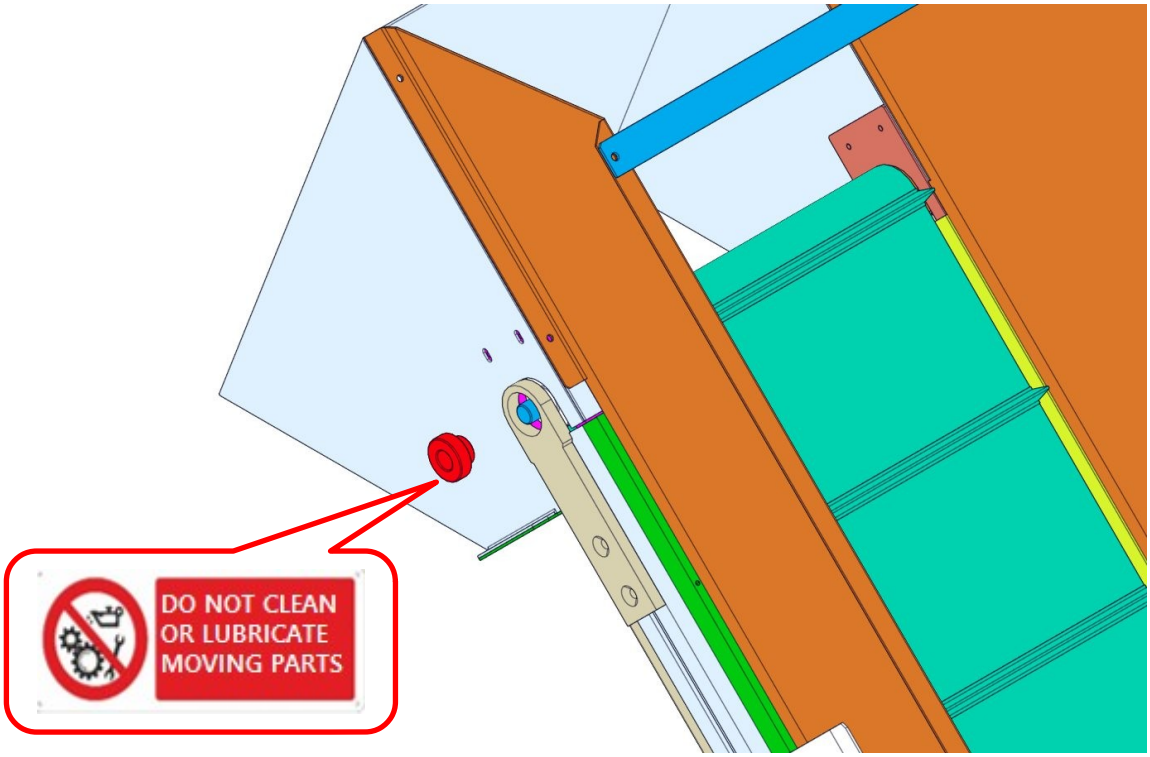
Carry out lubrication operations according to the following phases:

1) Assess the correct positioning of electrical connections;
2) Inspect quality status of the gearmotor and, when necessary, replace it;
3) Check level of lubricants within the gearbox;
4) Replenish oil level;
5) Clean possible lubricants residuals.



LUBRICATION OF COMPONENS SUBJECT TO WEAR AND TEAR	OM3
QUALIFIED OPERATOR	M1
FREQUENCY	Monthly
NECESSARY TIME:	10 minutes

Proceed with the greasing and lubrication of components subject to wear and tear, such as, for example, bearings.



8.2.2 ELECTRICAL OPERATIONS

The following table includes the main electrical maintenance operations established for the partly completed machinery BELT ELEVATOR.

ELECTRICAL MAINTENANCE				
ITEM	**CODE**	**INTERVENTION**	**OPERATOR**	**FREQUENCY**
1.	OE1	Checking of electrical cables and connections	M2	Yearly
2.	OE2	Assessment of protection circuit	M2	1000 hours

The values indicated in the column OPERATOR refer to the table **"**OPERATORS CLASSIFICATION**"** of this manual.

CHECKING OF ELECTRICAL CABLES AND CONNECTIONS	**OE1**
QUALIFIED OPERATOR	M2
FREQUENCY	Yearly
NECESSARY TIME:	30 minutes
Proceed with the assessment of the state of electrical cables and relevant connections. Repair / replace when necessary.	

ASSESSMENT OF PROTECTION CIRCUIT	**OE2**
QUALIFIED OPERATOR	M2
FREQUENCY	1000 hours
NECESSARY TIME:	30 minutes
Visually inspect all ground connections, within the electrical switchboard and in the different parts of the machinery, checking that these are in order; Carry out an instrumental assessment of the protection circuit, by means of procedures and instruments complying with what provided for by the regulations in force in the country of use of the partly completed machinery.	

8.2.3 FURTHER INTERVENTION PROCEDURES

The partly completed machinery object of this manual does not require further intervention procedures.

8.3 INDICATIONS CONCERNING CLEANING OF THE PARTLY COMPLETED MACHINERY

Before proceeding to the cleaning of the partly completed machinery, please carefully read the paragraphs "RESIDUAL RISKS" and "PERSONAL PROTECTION EQUIPMENT".

Cleaning operations must be performed when the partly completed machinery is disconnected from power sources (isolated electrical and pneumatic supplies.)

An accurate selection of equipment and detergents to use, which will differ according to the different cases, should be made.

In general, the necessary steps are:

- Mechanical removal of gross residuals;
- Initial rinsing with water;
- Applying of detergents;
- Final rinsing and possible drying.

When necessary, organise a further disinfection phase aimed at removing bacterial build-up.
Generally non-abrasive, non-aggressive alcohol-based solutions are used, as these do not leave residuals on the surfaces.

The cleaning operations indicated in this chapter must be taken into consideration after incorporation of the partly completed machinery, according to the use and work environment.

8.3.1 CLEANING PROCEDURES

The following table indicates the main cleaning operations established for the partly completed machinery BELT ELEVATOR.

CLEANING OPERATIONS				
ITEM	**CODE**	**INTERVENTION**	**OPERATOR**	**FREQUENCY**
1.	PU1	Surface cleaning of the partly completed machinery	C2	End of process
2.	PU2	Belt cleaning	C2	End of process

The values included in the column OPERATOR refer to the table “OPERATORS CLASSIFICATION” of this manual.

SURFACE CLEANING OF THE PARTLY COMPLETED MACHINERY	PU1
QUALIFIED OPERATOR	C2
FREQUENCY	*At the end of the process*
NECESSARY TIME:	15 minutes

- Clean external surfaces and internal parts of the elevator where residuals may build up by means of compressed air;
- Organise possible rinsing with lukewarm water and sponge to remove possible processing residues;
- Dry with a cloth or by means of compressed air;
- Remove crankcases and verify possible presence of processing residues which may alter the normal operation of the partly completed machinery;
- Re-position the removed crankcases and fix them.

Furthermore, periodically check cleaning of external surfaces and air inlets of gearbox, or gearmotor, to avoid problems to the refrigeration system.

Evaluate frequency of the operations according to the work environment (materials processed, presence of dust etc.).

BELT CLEANING	**PU2**
QUALIFIED OPERATOR	*C2*
FREQUENCY	*At the end of the process*
NECESSARY TIME:	*15 minutes*

1. Clean the belt surface with lukewarm water and sponge;
2. Carefully dry with a cloth or by means of compressed air;
3. When in presence of persistent deposits, use a neutral soapy detergent solution and lukewarm water, then rinse.

Establish frequency of the operation according to the work environment (materials processed, presence of dust etc.).

9 TROUBLESHOOTING

Following are some likely causes of faults (anomalies due to the partly completed machinery operation) and less likely ones (anomalies due to an improper use of the partly completed machinery or manufacturing faults).

The engine doesn't start:

CAUSE	SOLUTIONS
Lack of voltage	Check connections

Machinery stoppage

CAUSE	SOLUTIONS
Damaged gearbox	Check and fix or possibly replace out of use parts.
Damaged shaft	Check and fix or possibly replace out of use parts.

Noise:

CAUSE	SOLUTIONS
Bearings fault	Check and replace when possible

10 SPARE PARTS CATALOGUE

All enquiries concerning spare parts should be addressed to:

GASCO group s.r.l.

Offices and Factory: via Alla Costa 18
17047 VADO LIGURE (SV) – ITALY
Phone 39 019 886188 (rollover) - gasco@gascogroup.it

Including:

1. Model of partly completed machinery;
2. Serial number;
3. Code of part that is being ordered;
4. Quantity;
5. Shipping instructions.

WARNING!

In case of replacement, please make sure to indicate the serial number shown on the label of the partly completed machinery, in order to replace the components with spare parts bearing the same characteristics and size.

Following are all the replacement groups of the partly completed machinery, with charts including:

- Identification of reference group;
- Identification table of spare and non-spare components;
- Blow-up of reference group, with relevant identification of spare parts.

Do not use spare parts different from the original.

The following table shows the criteria adopted to define the spare parts priorities:

Risk level	
F	**High risk:** with the possible stoppage of machinery/partly completed machinery.
S	**Medium risk:** with possible slowing down of machinery/partly completed machinery operation.
N	**Low risk:** with low impact with regards to the machinery/partly completed machinery operation.
Risk frequency	
H	Less than **6 months** frequency
L	With frequency equal to or higher than **1 year**.

Risk level	Risk frequency	CRITICALITY LEVEL
F	**H**	**A**
S	**H**	**A**
F	**L**	**A**
S	**L**	**B**
N	**H**	**B**
N	**L**	**C**

Not all spare parts may be available in warehouse for prompt delivery, therefore, in order to reduce to a minimum the necessary stoppage time for possible replacements, we suggest keeping available at your warehouse some of the parts most subject to wear and tear.

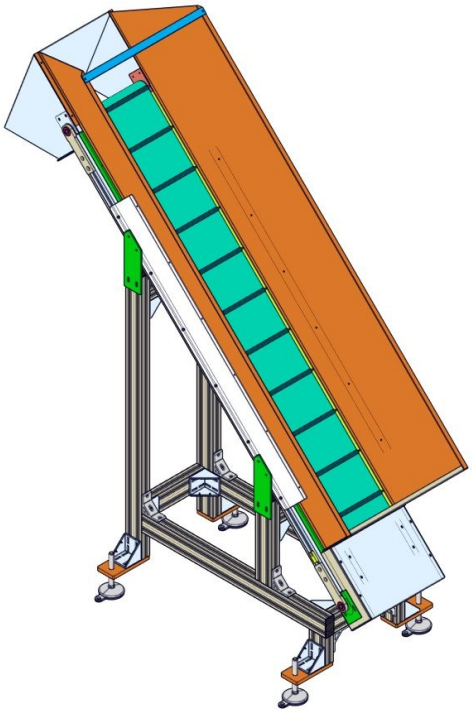
10.1 POSITION OF SPARE PARTS

INDEX

I.1.1 SPARE PARTS OF GROUND STRUCTURE ELEVATOR – BASE VERSION

Description

GROUND STRUCTURE ELEVATOR – BASE VERSION



Description

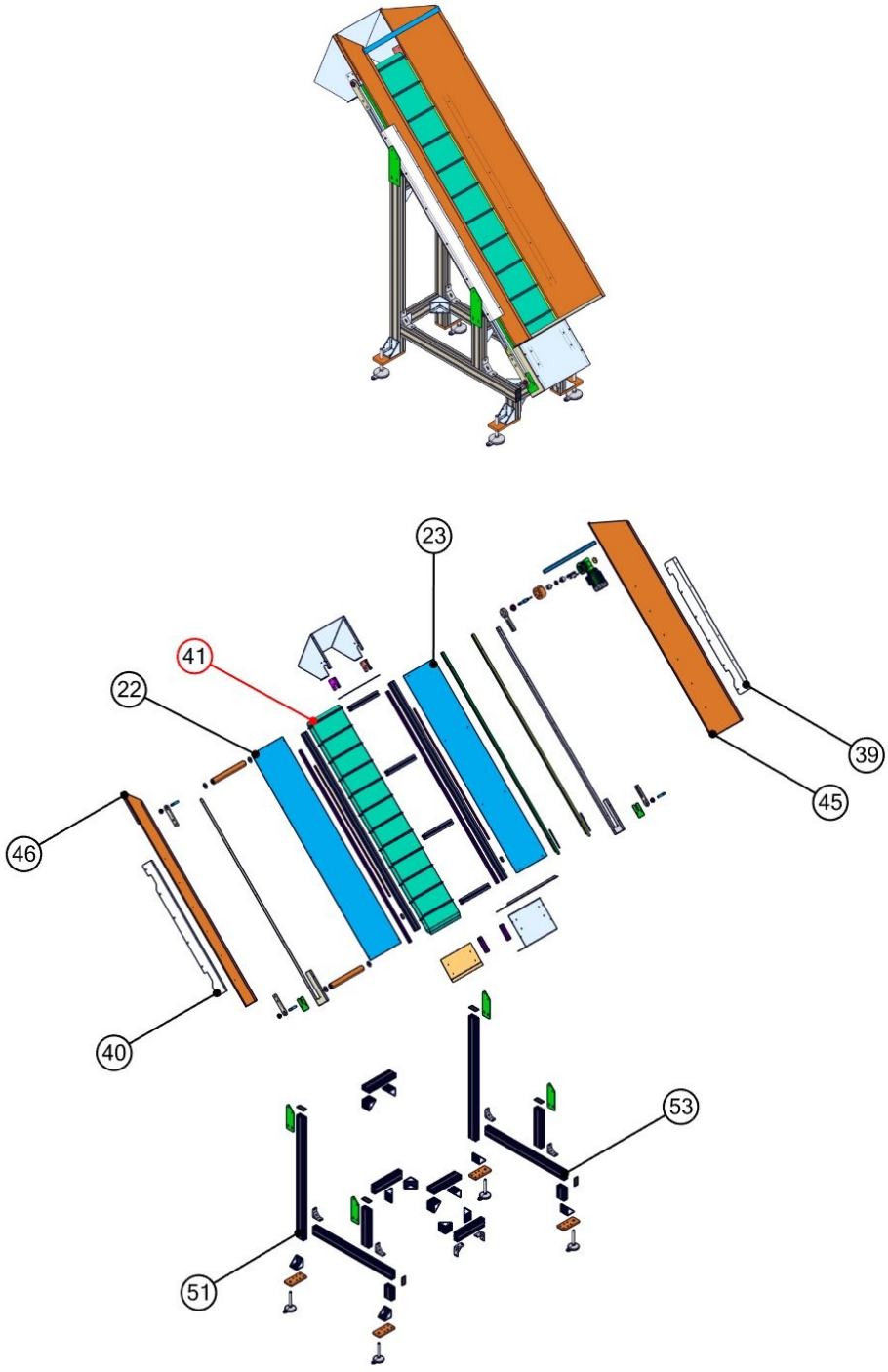
GROUND STRUCTURE ELEVATOR – BASE VERSION

BOM ID	Q.TY	Code	Description	Priority
1	4	21315_CARIC_SUPP_PIAT_PORT_RU	WHEEL SUPPORT PLATE	
2	1	21743_CAR_ALBERO_RIDUTTORE	GEARBOX SHAFT	C
3	1	21743_CAR_ANGOLARE_NERV_TRAMOG	HOPPER RIBBING BRACKET	
4	1	21743_CAR_CHIAVETTA_LATO_RIDUT	GEARBOX SIDE KEY	
5	1	21743_CAR_CHIAVETTA_LATO_TAMB	DRUM SIDE KEY	
6	2	21743_CAR_CHIAVETTA_RIDUTTORE	GEARBOX KEY	
7	1	21743_CAR_CHIUSURA_CUFFIA_POL	SHROUD FASTENING	
8	1	21743_CAR_CHIUSURA_CUFFIA_POL2	SHROUD FASTENING 2	
9	2	21743_CAR_CHIUSURA_TEN_LAT	SIDE TENSION FASTENING	
10	1	21743_CAR_CUFFIA_DI_RITORNO	RETURN SHROUD	
11	1	21743_CAR_CUFFIA_DI_SCARICO	DISCHARGE SHROUD	
12	1	21743_CAR_CUSCIN_MOTORE	SICOMAT ENGINE BEARING	C
13	3	21743_CAR_CUSCINETTO	SICOMAT BEARING	C
14	1	21743_CAR_DISTANZIALE_MOTORID	GEARMOTOR SPACER	
15	1	21743_CAR_FIANCO_DI_RITORNO_DX	RIGHT RETURN FLANK	
16	1	21743_CAR_FIANCO_DI_RITORNO_SX	LEFT RETURN FLANK	
17	1	21743_CAR_FLANGIA_PORTAMOT	SICOMAT MOTOR SUPPORTING FLANGE	
18	3	21743_CAR_FLANGIA_RINVIO	SICOMAT RETURN FLANCE	
19	1	21743_CAR_GIUNTO_ELASTICO_1	ELASTIC COUPLING 1	C
20	1	21743_CAR_GIUNTO_ELASTICO_2	ELASTIC COUPLING 2	C
21	1	21743_CAR_GIUNTO_ELASTICO_3	ELASTIC COUPLING 3	C
22	1	21743_CAR_LAM_DI_RITORNO_FONDO	RETURN PLATE BOTTOM	
23	1	21743_CAR_LAMIERA_FONDO	BELT BOTTOM PLATE	
24	2	21743_CAR_LONGHERONE	SICOMAT 45x45 ALLUMINUM PROFILE BEAM	
25	1	21743_CAR_MOTORIDUTTORE_F	BONFIGLIOLI GEARMOTOR:VF44 F2 70 P63 B14 B3	B
26	1	21743_CAR_PERNO_MOTORE	SICOMAT DRIVING PIN	C
27	3	21743_CAR_PERNO_RINVIO	SICOMAT ROLLS RETURN PIN	C
28	2	21743_CAR_PIATTO_CAVA_PROF	PROFILE SLIDER FLAT	
29	1	21743_CAR_PIATTO_FERMAPEZZI	WORKHOLDER PLATE	
30	4	21743_CAR_PIATTO_FISS_NASTRO	BELT SUPPORT PLATE	
31	4	21743_CAR_PIEDE_MARTIN_26116	MARTIN LEVELLING FOOT 26116/F	C
32	1	21743_CAR_PROFILO_POLIZENE_DX	UPPER RIGHT POLYZENE PROFILE	
33	2	21743_CAR_PROFILO_POLIZENE_INF	LOWER POLYZENE PROFILE	
34	1	21743_CAR_PROFILO_POLIZENE_SX	UPPER LEFT POLYZENE PROFILE	

Description

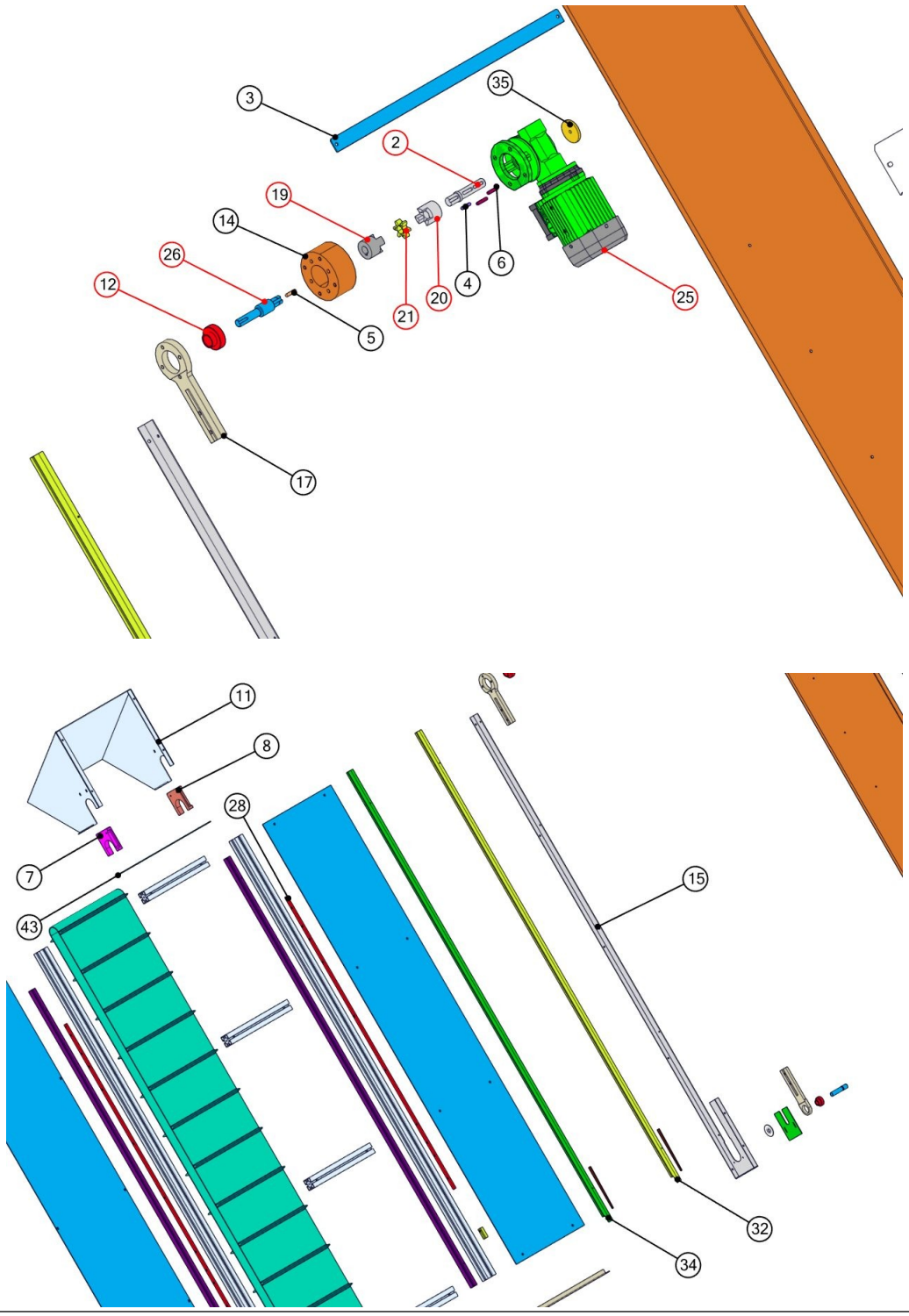
CARICATORE STRUTTURA A TERRA – VERSIONE BASE

BOM ID	Q. ty	Code	Description	Priority
35	1	21743_CAR_ROND_CHIUS_RIDUTTORE	GEARBOX FIXING WASHER	
36	2	21743_CAR_RULLO_PROFILO	SICOMAT 50 ROLL PROFILE	C
37	4	21743_CAR_RULLO_TAPPO	SICOMAT 50 ROLL PLUG	
38	2	21743_CAR_STFFA_FISS_FERMAPZ	WORKHOLDER FIXING BRACKET	
39	1	21743_CAR_SUPP_SPONDA_DX	RIGHT SIDEBOARD SUPPORT	
40	1	21743_CAR_SUPP_SPONDA_SX	LEFT SIDEBOARD SUPPORT	
41	1	21743_CAR_TAPPETO	BELT	A
42	2	21743_CAR_TENDINASTRO	BELT TENSOR FOR SICOMAT 50 ROLLS	
43	1	21743_CAR_TRAMOG_LATO_SCARICO	HOPPER SHEET DISCHARGE SIDE	
44	1	21743_CAR_TRAMOGG_LATO_CAR	HOPPER SHEET LOADING SIDE	
45	1	21743_CAR_TRAMOGGIA_LATO_DX	RIGHT SIDE HOPPER	
46	1	21743_CAR_TRAMOGGIA_LATO_SX	LEFT SIDE HOPPER	
47	4	21743_CAR_TRAVERSA	SICOMAT 45x45 ALUMINIUM PROFILE BAR	
48	12	21743_CARIC_SUPP_ANGO_DOPPIO	86x86 ANGLE PROFILE (ALUSIC)	
49	6	21743_CARIC_SUPP_ANGO_SINGOLO	43x88 ANGLE PROFILE (ALUSIC)	
50	2	21743_CARIC_SUPP_COLON_INTERM	SICOMAT 45x90 ALUMINIUM PROFILE MIDDLE COLUMN	
51	2	21743_CARIC_SUPP_COLONN_ANTER	SICOMAT 45x90 ALUMINIUM PROFILE FRONT COLUMN	
52	2	21743_CARIC_SUPP_COLONN_POST	SICOMAT 45x90 ALUMINIUM PROFILE BACK COLUMN	
53	2	21743_CARIC_SUPP_LONGH_INFER	SICOMAT ALUMINIUM PROFILE LOWER BEAM 45x90	
54	6	21743_CARIC_SUPP_TAPP_PROF	90x45 ALUSIC PROFILE END CAP	
55	4	21743_CARIC_SUPP_TRAVERSA_INT	SICOMAT 45x90 ALUMINIUM PROFILE BAR	
56	2	21743_CARICATORE_CHIUSURA_TASCA	LOADER POACH FASTENING	



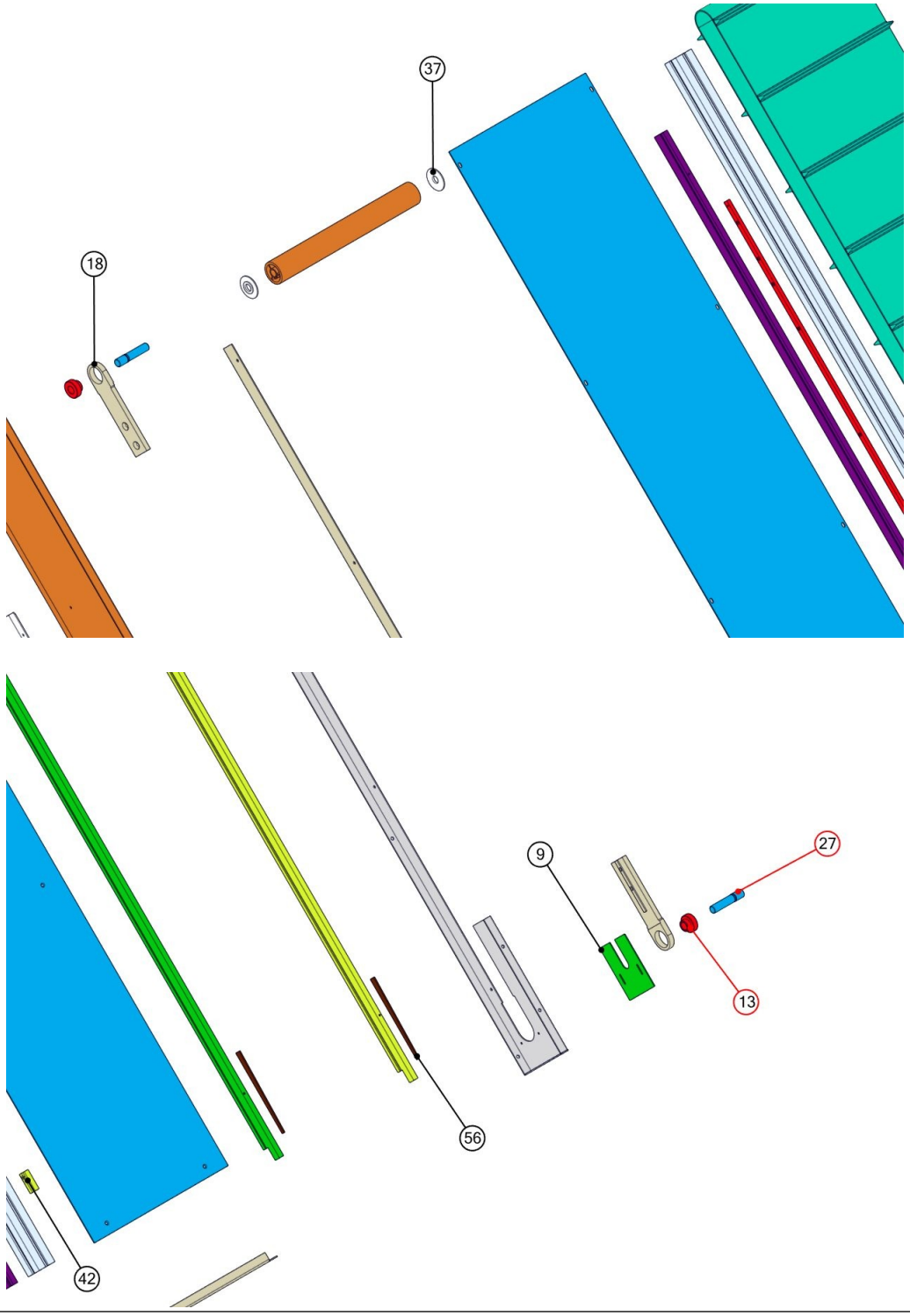
Description

GROUND STRUCTURE ELEVATOR – BASE VERSION



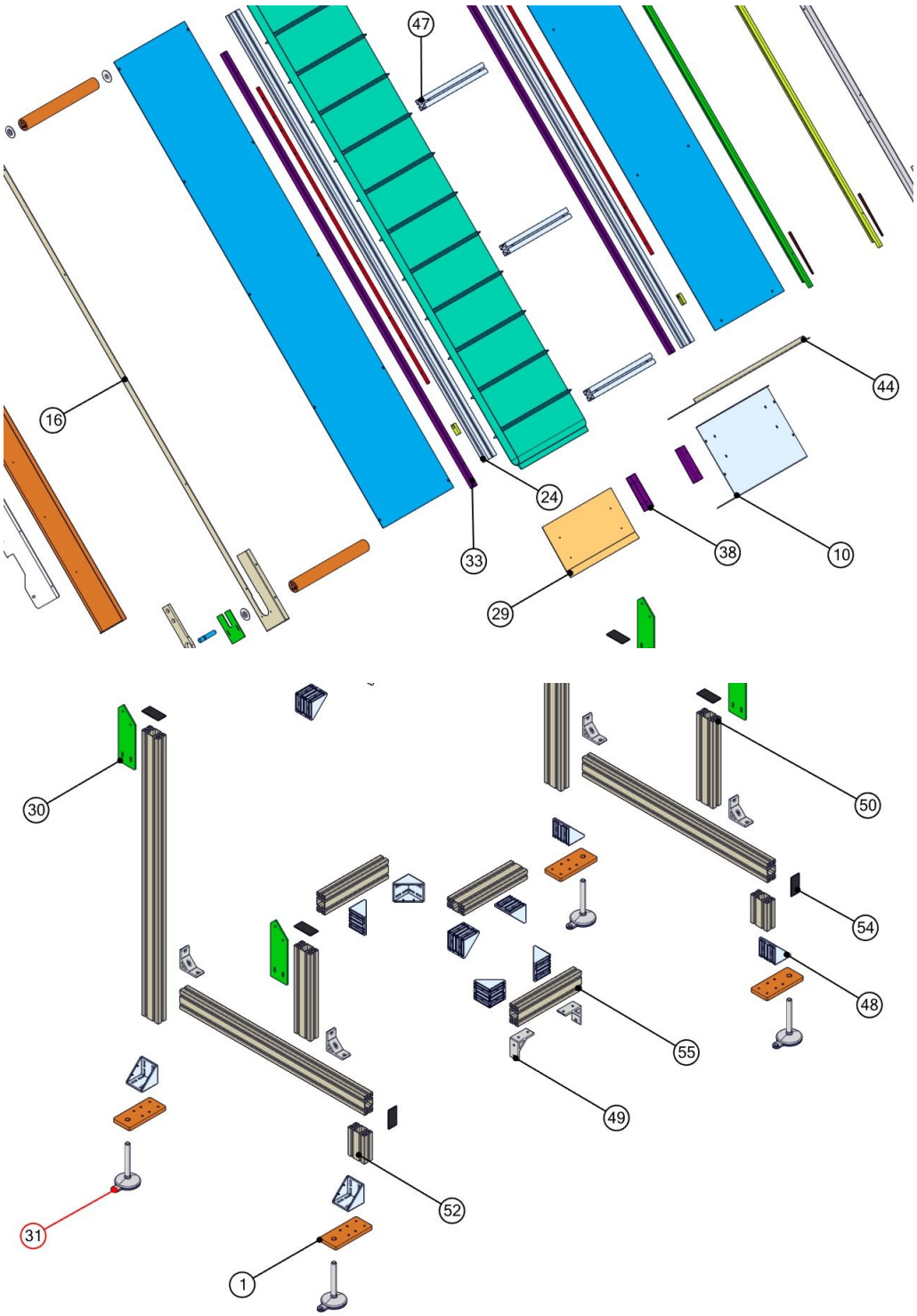
Description

GROUND STRUCTURE ELEVATOR – BASE VERSION



Description

GROUND STRUCTURE ELEVATOR – BASE VERSION



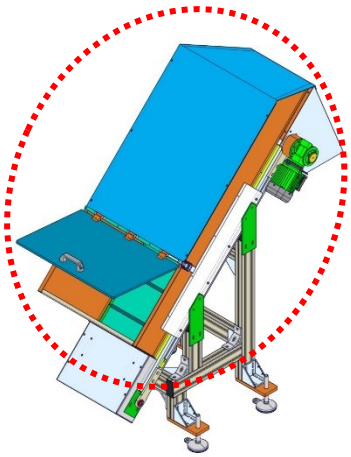
Description

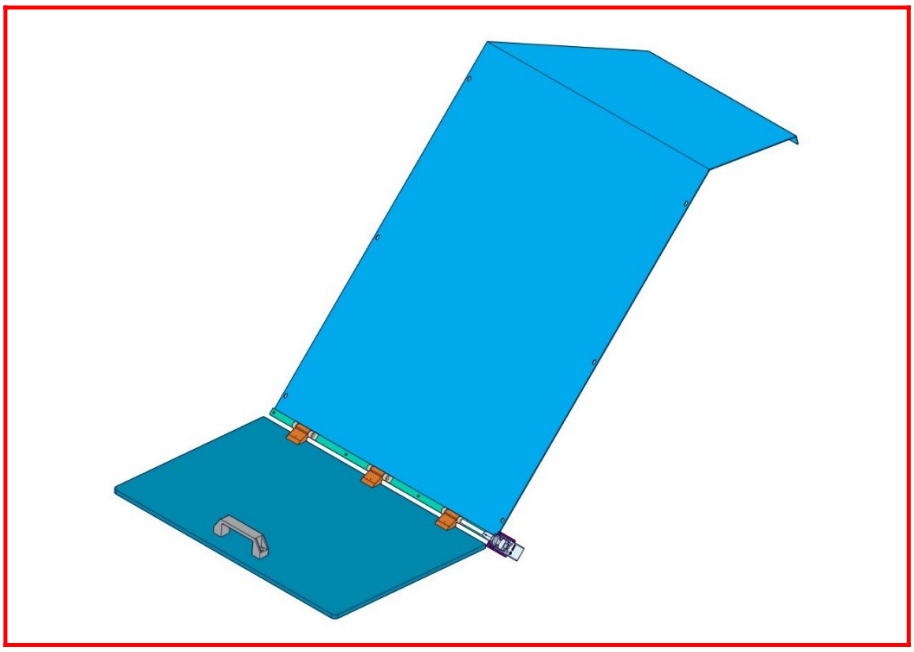
GROUND STRUCTURE ELEVATOR – BASE VERSION

I.1.2 SPARE PARTS OF UPPER COVER ASSEMBLY

Description

UPPER COVER ASSEMBLY

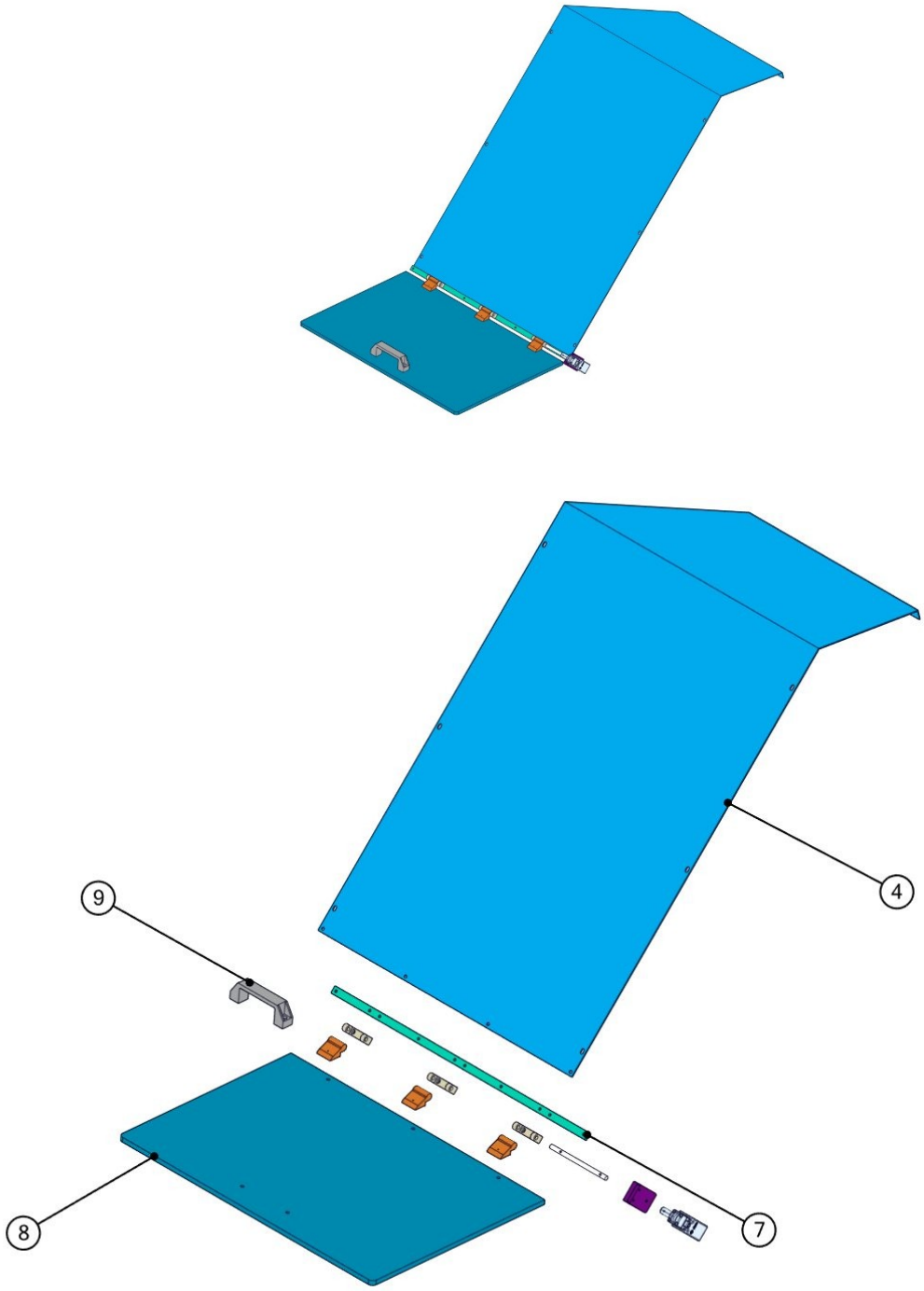




Description

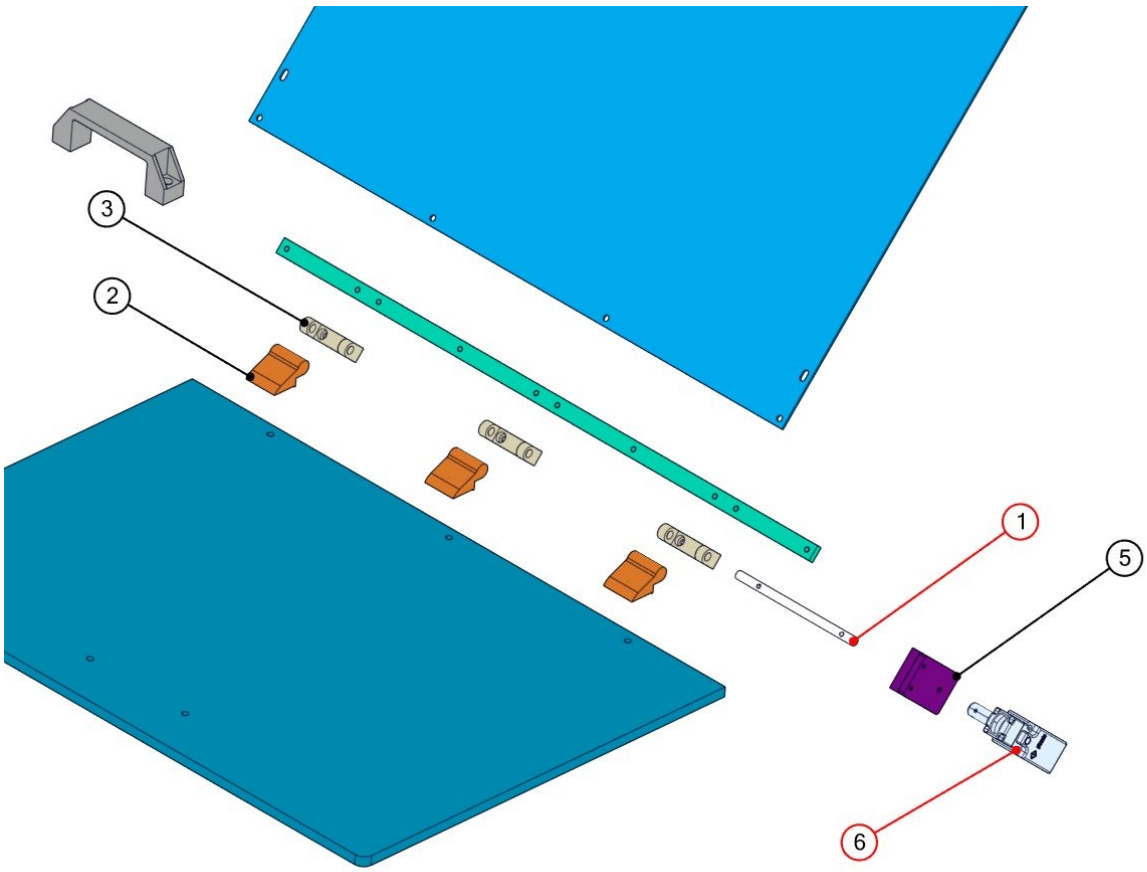
UPPER COVER ASSEMBLY

BOM ID	Q. ty	Code	Description	Priority
1	1	21796_CAR_ALBERO_CERNIERA_SIC.stp	SAFETY SENSOR HINGE SHAFT	A
2	3	21796_CAR_CERNIERA_ALETTA.stp	HINGE FLAP	
3	3	21796_CAR_CERNIERA_CORPO.stp	HINGE BODY	
4	1	21796_CAR_CUFFIA_SUPERIORE.stp	UPPER SHROUD	
5	1	21796_CAR_DIST_FISSAGGIO_SENS.stp	SENSOR FIXING SPACER	
6	1	21796_CAR_FR596-M2_ASS_ASM.stp	PIZZATO FR596-M2 HINGE SAFETY SWITCH	A
7	1	21796_CAR_TRAV_PORTACER.stp	HINGE SUPPORT PROFILE BEAM	
8	1	21796_CAR_PORTELLA_CARICO.stp	LOADING DOOR	
9	1	21796_CAR_MANIGLIA.stp	HANDLE	



Description

UPPER COVER ASSEMBLY



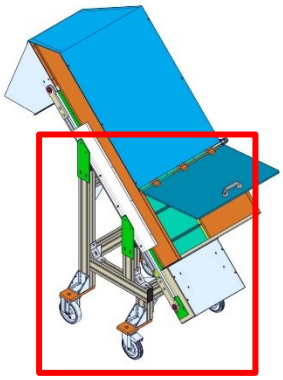
Description

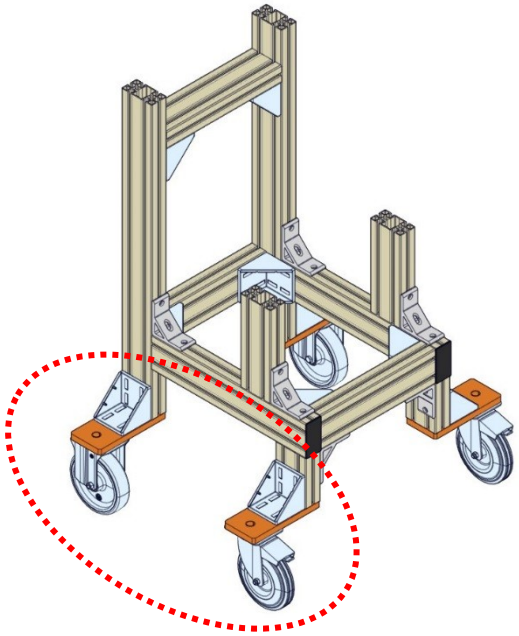
UPPER COVER ASSEMBLY

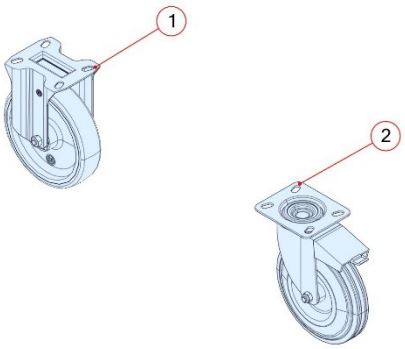
I.1.3 SPARE PARTS OF BASE WHEELS ASSEMBLY

Description

BASE WHEELS ASSEMBLY







Description

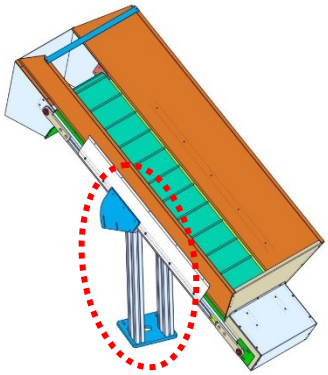
BASE WHEELS ASSEMBLY

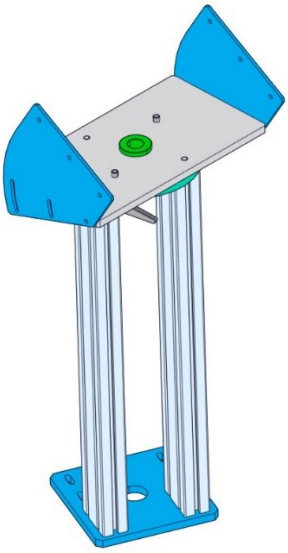
BOM ID	Q. ty	Code	Description	Priority
1	2	CARICATORE_RUOTA_TELLURE_FIS_AS_ASM	FIXED WHEEL	C
2	2	CARICATORE_RUOTA_GIREVOLE_ASS_A_ASM	ROTATING WHEEL WITH BRAKE	C

I.1.4 SPARE PARTS OF LOWER SUPPORT ASSEMBLY – VERSION ON PLATE

Description

LOWER SUPPORT ASSEMBLY – VERSION ON PLATE

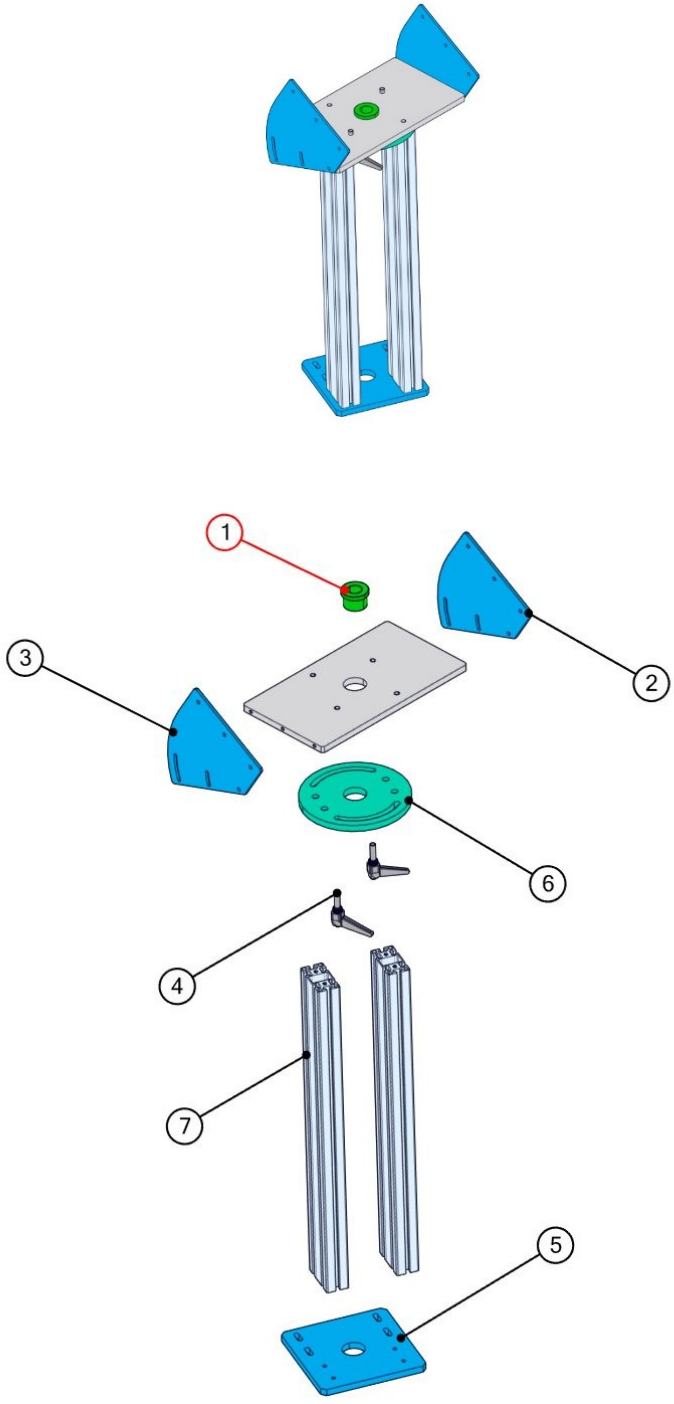




Description

LOWER SUPPORT ASSEMBLY – VERSION ON PLATE

BOM ID	Q. ty	Code	Description	Priority
1	1	22141-CAR1-01_BOC_CENTRAG_SUP_	SUPPORT CENTERING BUSHING	C
2	2	22141-CAR1-01_PIASTRA_FISSAGG	SUPPORT FIXING PLATE	
3	1	22141-CAR1-01_TRAVERSA_SOST	SUPPORT BEAM	
4	2	22141_SUPP_MANOPOLA_12X40	ELESA ADJUSTABLE HANDLE	
5	1	22141_SUPP_PIASTRA_BASE	BASE PLATE	
6	1	22141_SUPP_PIASTRA_SUP	UPPER PLATE	
7	2	22141_SUPP_PROFILO_100X50	ALUSIC 100x50 ALUMINIUM PROFILE	



Description

LOWER SUPPORT ASSEMBLY – VERSION ON PLATE

11 ATTACHMENTS

The documents included in the following table is supplied in attachment to this manual.

ATTACHMENTS			
File / Document	**Title**	**Type**	**Supplier**
DI.INC_CAR	Belt Elevator Declaration of Incorporation	Declaration of Incorporation	Gasco group S.r.l.